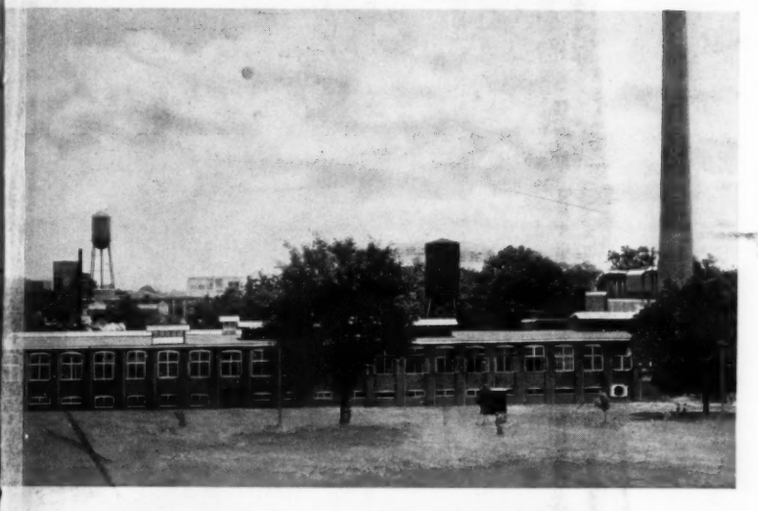
JULY, 1937

COTTON

Serving the TEXTILE INDUSTRIES

JUL 15

NEW SOUTHERN PLANT



● NEW PLANT in the heart of the South produces the entire line of Nopco textile processing specialties.

A Complete Organization

Serving Southern Textile Industry

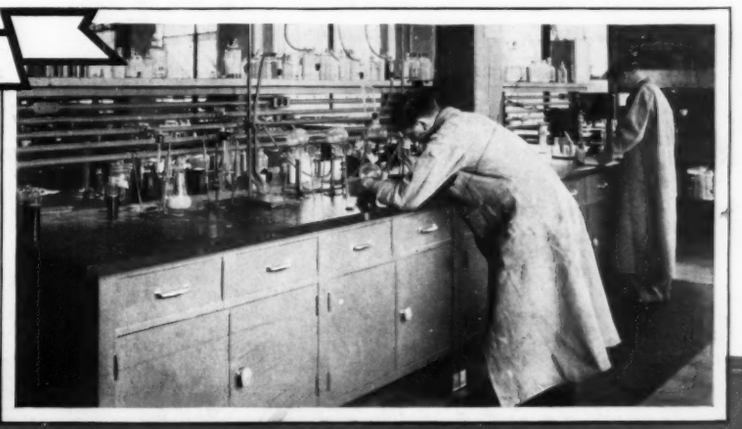
NOPCO's new Southern headquarters at Cedartown, Ga. offers you: A modern sulphonation plant close at hand . . . plus well-equipped laboratories for textile research . . . plus an organization of men who understand Southern mill problems.

Translated into service this plant means quicker contact with a reliable source of technical information; smooth, more efficient delivery of uniform textile specialties and closer cooperation toward the solution of your processing problems.

Your inspection of Nopco's complete organization at Cedartown — at any time — is cordially invited.

NOPCO

"EVOLVED THRU RESEARCH"

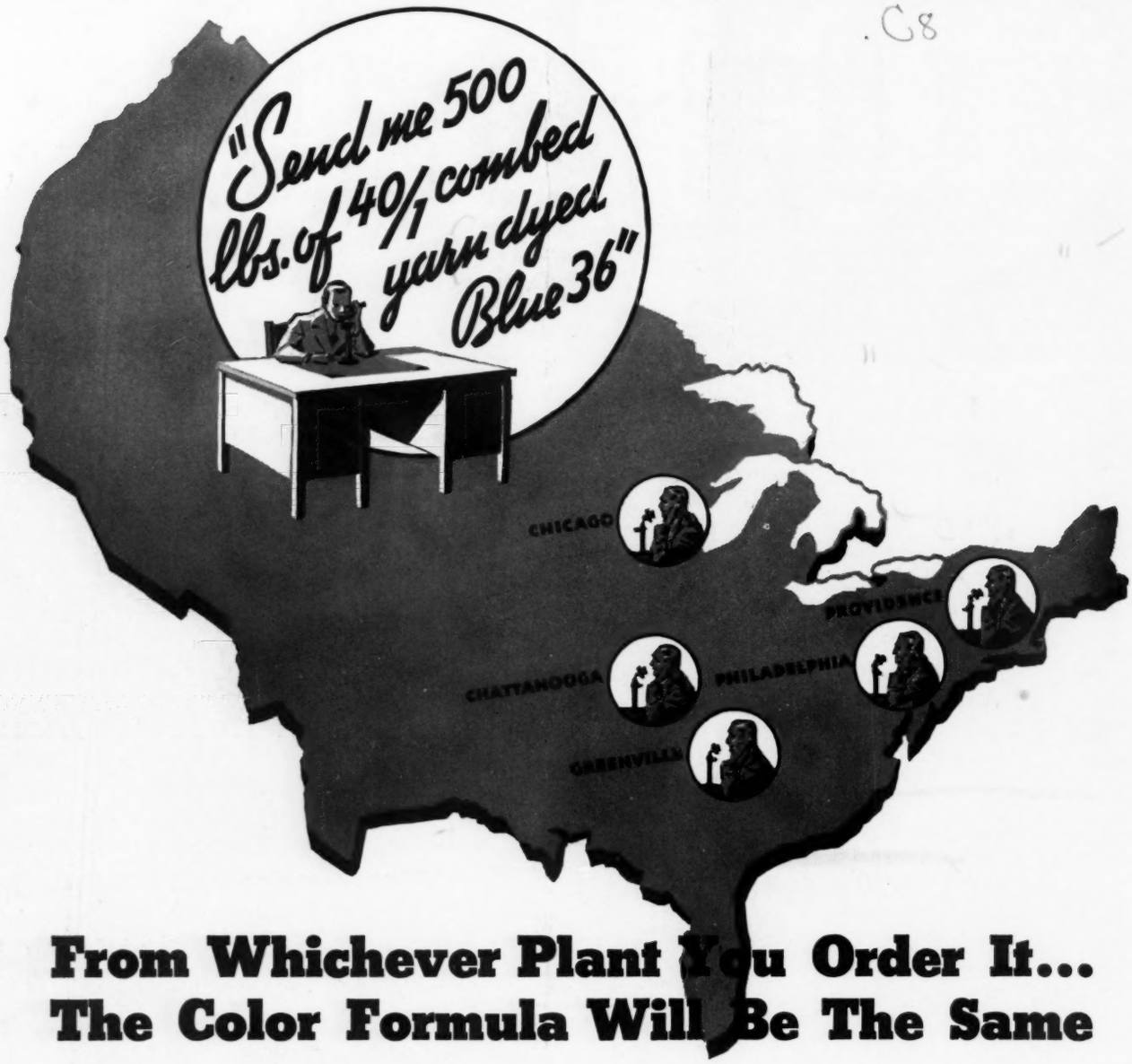


● EVERY PROCESSING specialty produced at Cedartown, Ga. is subjected to constant laboratory analyses to insure uniformity.

NATIONAL OIL PRODUCTS CO., Harrison, N. J.

CHICAGO • BOSTON • CEDARTOWN, GA. • SAN FRANCISCO

TS1550
.C8



From Whichever Plant You Order It... The Color Formula Will Be The Same

• The fact that Franklin Process is a national service may be a safeguard to you against color troubles. For instance if your mill is in the South and you wish to match a Franklin Process color dyed in Providence, you can order the color from our Greenville or Chattanooga plant with every assurance that it will be dyed with the same formula, that it will look the same in all lights, that it will finish up the same and that it will have the same fastness as your sample. Furthermore you can count on prompt delivery since this standardization of formulas facilitates color matching and since equipment in all Franklin Process plants is adequate. • When you receive the dyed yarn you may also expect level dyeing and a package that will warp or wind, by rotation or over end at high speed. The Franklin Package makes these results possible.

One Reason for Franklin Process Quality

All package dyeing is not the same. There is one important mechanical difference between Franklin Process and other package dyeing methods and partly because of this difference Franklin Process produces superior results. Let our representative explain this difference to you.

Franklin Process

SPECIALISTS IN PACKAGE DYEING SINCE 1910

Natural Yarns *Colored Yarns* *Glazed Yarns* *Dyeing and Processing Machines*

PROVIDENCE • PHILADELPHIA • GREENVILLE • CHATTANOOGA • CHICAGO • N. Y. REPRESENTATIVE, 40 WORTH ST.

COTTON is published monthly by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga.
Subscription Rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign Countries, $2.00 per year.
Entered as second-class matter at the postoffice, Dalton, Ga., under the Act of March 3, 1879.

Installing
Draper High Speed Looms
Is a Good Beginning

Running Them to Get
The Best That's in Them
Is a Continuous Job

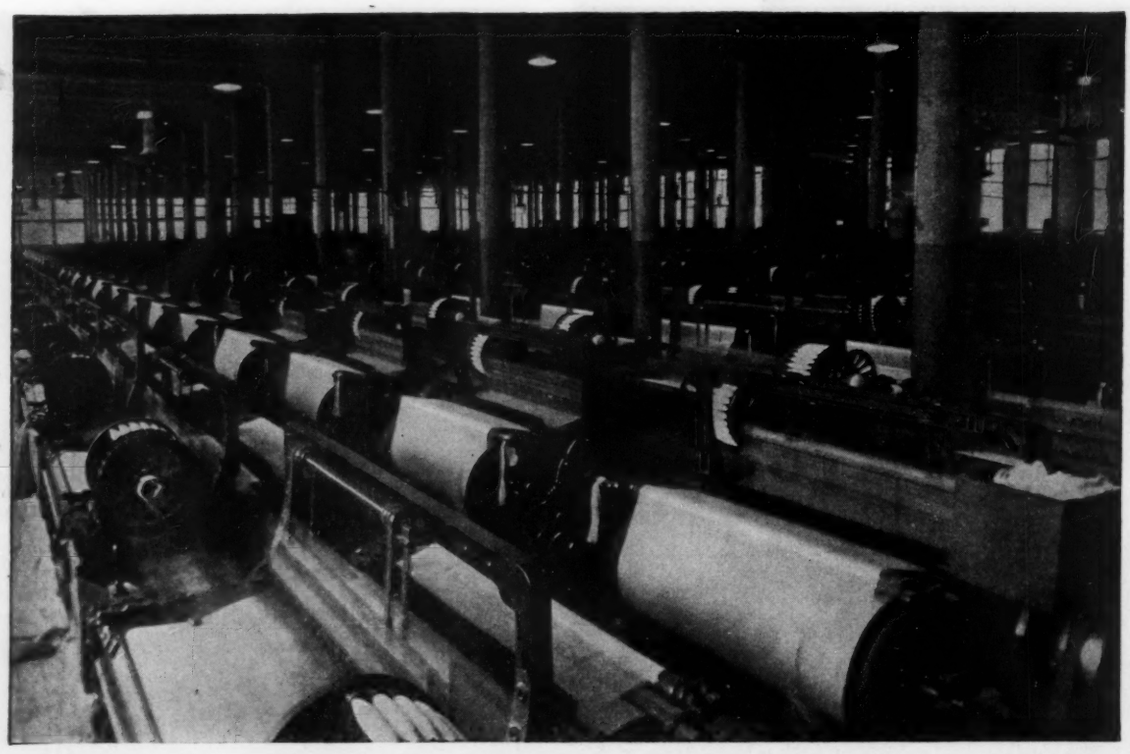
You Can't Run Them
As They Should Be Run
If You Use Poor Accessories

You Need	Because
Draper Shuttles	They
Draper Bobbins	Are Made
Draper Drop Wires	For Draper Looms

You Need Also Draper-made Repair Parts ✣ Don't on Any Account Take a Chance with Substitutes on any Draper High Speed Looms of the X Family

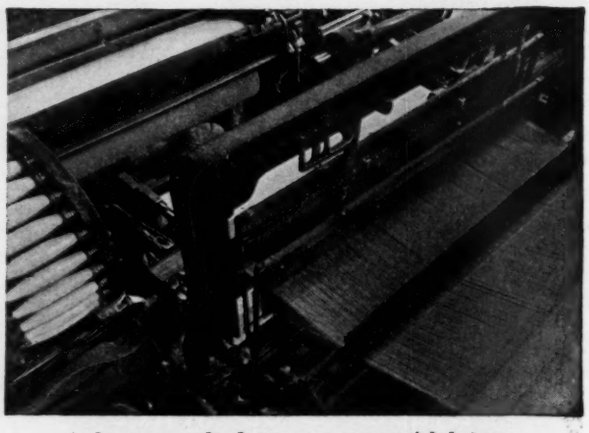
DRAPER CORPORATION

Atlanta Georgia Hopedale Massachusetts Spartanburg S C



NOW COME LONGER-LASTING

looms



As looms are the large consumers of lubricants in any textile mill, it pays to check into their lubrication needs. While repair parts are usually inexpensive, the loss of the loom from the production line is costly indeed.

AFTER years of comparative neglect, the "problem children" of the textile industry are getting the attention they deserve . . . you can now meet the lubrication requirements of your looms by using Texaco Lubricants.

Selected to suit the peculiar operating conditions in the textile industry, Texaco Lubricants reduce oil-spotting because they resist throwing. They stay where they belong, in the bearings, on the cams, and on the gears.

Looms which are properly lubricated assure free movement of all component parts, thus *eliminating the chief cause of defective* weaving. Add years of useful life to your looms, and greatly reduce the need to replace worn-out parts, by switching to the right grades of Texaco.

Trained lubrication engineers are available for consultation on the selection and application of Texaco Petroleum Products. Prompt deliveries assured through 2020 warehouse plants throughout the United States. The Texas Company, 135 East 42nd Street, New York City.

TEXACO

TEXACO *Industrial Lubricants*

DESIGNED AND BUILT DISTINCTLY FOR THE TEXTILE INDUSTRY!

Allis-Chalmers Engineers made an exhaustive study of the motor needs of the Textile Industry and then designed and built a special motor—the Allis-Chalmers Quick Clean Motor—to meet every exacting detail of those needs.

The makeshift of merely adapting an ordinary, standard motor to textile usage was made obsolete by the advent of the Allis-Chalmers Quick-Clean Motor.

In this motor overheating is eliminated and maintenance costs are reduced to the minimum, because it actually and thoroughly cleans itself.

Three exclusive Allis-Chalmers features are responsible for this—(1) Big unrestricted air passages, (2) Glass-smooth inside surfaces to which dust and lint cannot adhere, (3) All working parts positively dust-sealed.

Available in four sizes: 5, 7½, 10 and 15 hp. Standard N. E. M. A. mounting dimensions.

The Allis-Chalmers Mfg. Co. builds standard motors of every type from 1 hp. up—also motors for special application

MOTOR DIVISION

ALLIS·CHALMERS

MILWAUKEE WISCONSIN

OFF WITH ITS DOME!

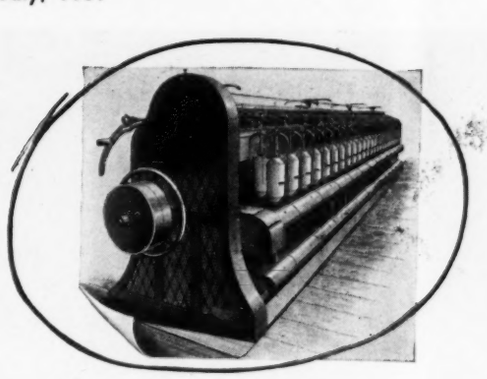
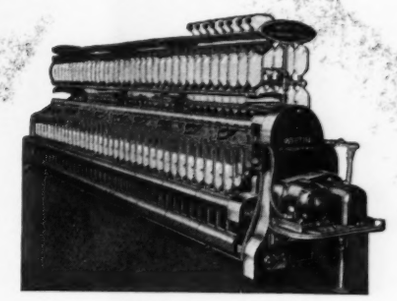
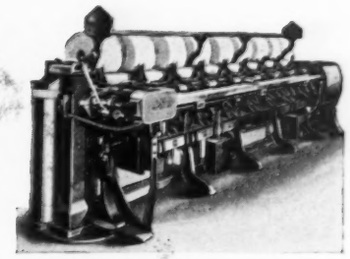
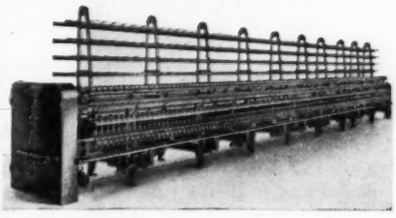
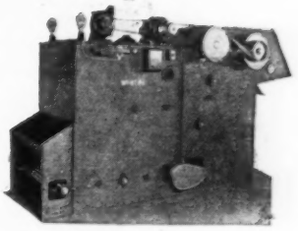
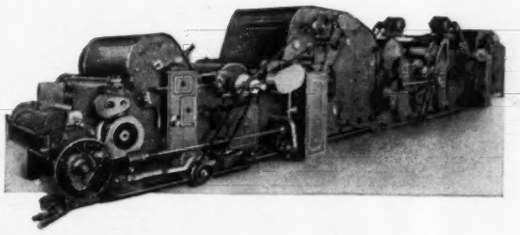
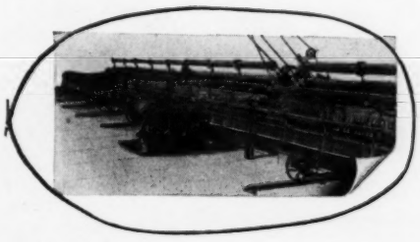
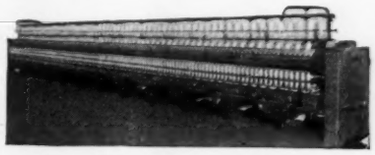
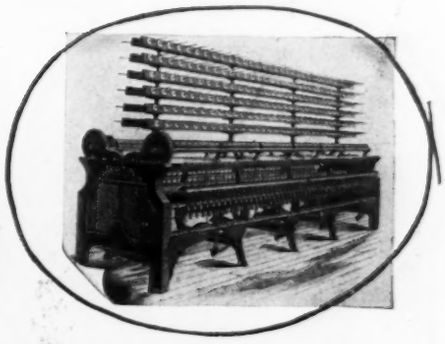
AND in with the chlorine. That may seem to be about all there is to filling liquid chlorine tank cars. But Herbert Hurd, tank car loader at Mathieson's Niagara Fall's plant for twelve years past, will tell you differently—will tell you that his company takes just as much pains to deliver your chlorine in trouble-free containers as it does in producing the chlorine itself.

After every trip, each Mathieson chlorine car is blown off with specially dried air to remove every trace of remaining chlorine; all valves are taken to the shop, reconditioned and carefully tested under pressure; safety valves are removed and tested to insure proper functioning; the car interior is closely inspected. All cars are filled on accurate scales to slightly above the final shipping weight; the excess chlorine is then blown off to eliminate air from lines and valves. A final test with ammonia vapor double-checks the valves and dome connections for any possible leaks.

This whole procedure would mean very little, however, if Mathieson didn't have men like "Herb" Hurd to put it in practice. Skillful, loyal and keenly aware of the significance of their jobs, these men are Mathieson's best assurance to chlorine users of a pure product in trouble-free containers.

The MATHIESON ALKALI WORKS (Inc.)
60 East 42nd Street **New York, N. Y.**

Soda Ash . . . Caustic Soda . . . Bicarbonate of Soda . . . Liquid Chlorine Bleaching Powder . . . HTH and HTH-15 . . . Ammonia, Anhydrous and Aqua . . . PH-Plus (Fused Alkali) . . . Sulphur Chloride . . . CCH (Industrial Hypochlorite) . . . Dry Ice (Carbon Dioxide Ice)

WEED OUT OBSOLETE MACHINERY

Whitin Machines included in recent revampment programs

WHITIN

- **Long Draft Roving Frames**
- **Long Draft Spinning Frames**
- **One Process Pickers**
- **Drawing Frames**
- **Blending Feeders**
- **Top Flat Cards**
- **Combers**
- **High Speed Twisters**
- **Woolen Cards**
- **Wool Spinning Frames**
- **Worsted Spinning Frames**

While many mills have attempted to breast the tide of rising costs by makeshift changes in equipment, other leading mills have weeded out all obsolete machinery from every one of their yarn processing departments. They have replaced antiquated profit-eating equipment with up-to-date and improved machines.

The list of machines at the left represents a portion of the improved textile equipment recently installed by Whitin. Check them against your own machines. Do you enjoy the benefits now available to mills which are thus equipped.

An incalculable amount of research and development by Whitin engineers in the past few years has resulted in machines of greater production capacity, increased quality of product, and greater operating savings.

Many a successful revampment program had its origin in these diversified Whitin improvements. Our representatives will be glad to discuss these programs with you and to show you how they can most profitably apply to your particular program.

WHITIN MACHINE WORKS

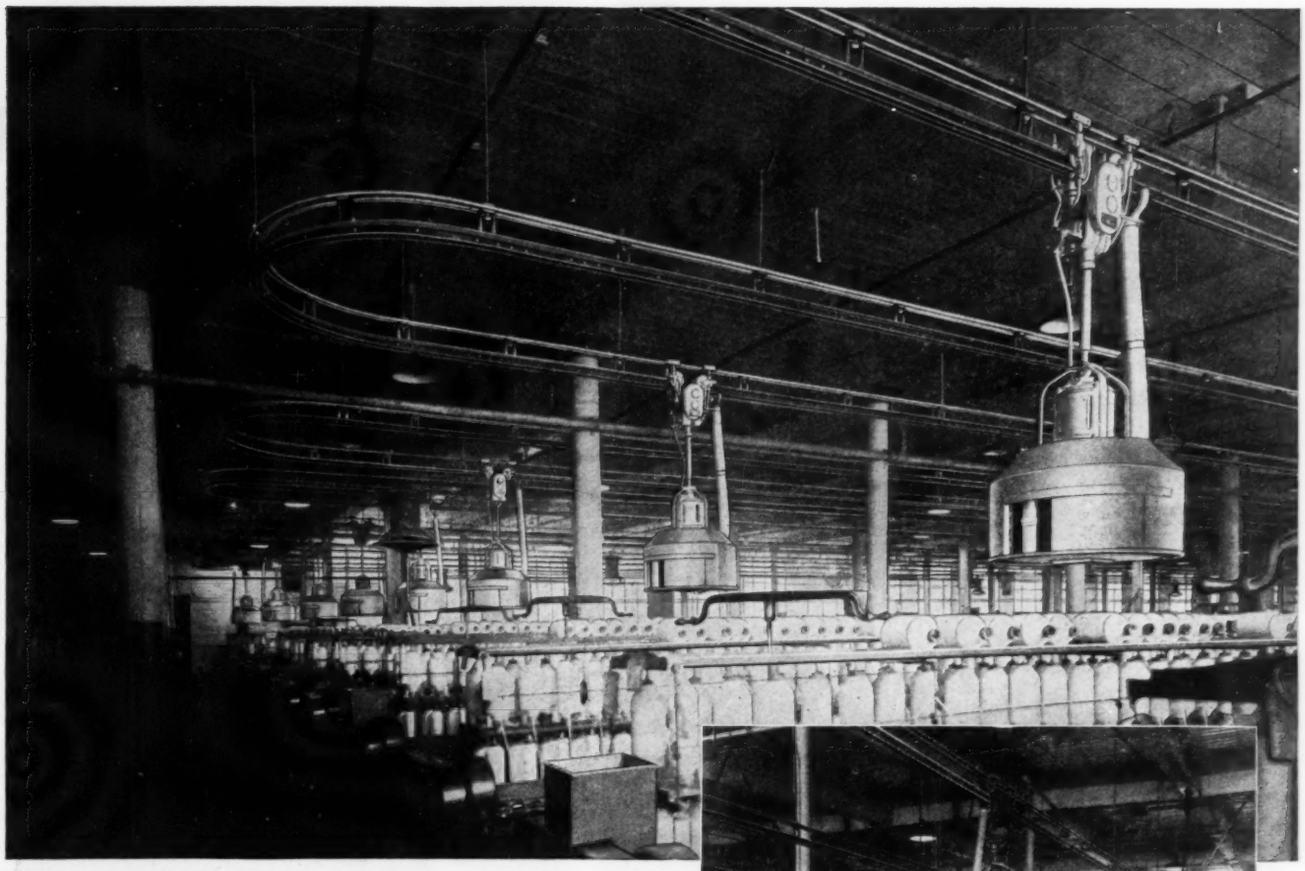
CHARLOTTE, N. C. WHITINSVILLE, MASS. ATLANTA, GA.

NOT merely modern in appearance... or modern in fittings . . . but MODERN IN CONCEPTION! That's the secret of the success of Union Special sewing machines. That's why they are able to fit in so well with modern manufacturing requirements. In other words, here you can find equipment developed specifically to solve the problems facing you right NOW! If you want to compete on an equitable basis for Today's Business, *see your Union Special representative at once.* UNION SPECIAL MACHINE CO., 400 N. FRANKLIN ST., CHICAGO, ILL.

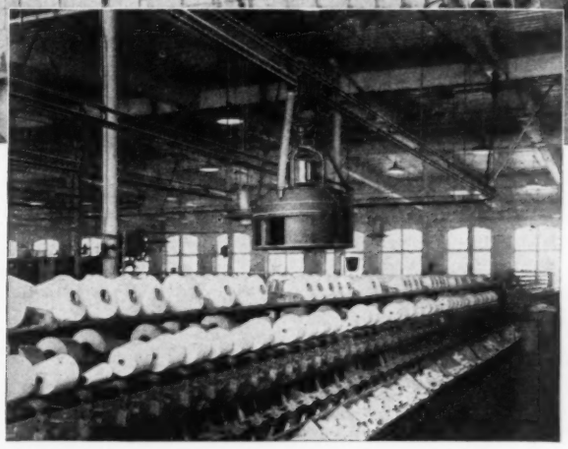
Style 52800F belongs to the popular new FIFTY-TWO-EIGHT Series. It is specially fitted for split tube border work.

DID YOU SEE . . .
The new Union Special hosiery seamer at Philadelphia? If not, write for a copy of illustrated descriptive bulletin. Free.

UNION SPECIAL



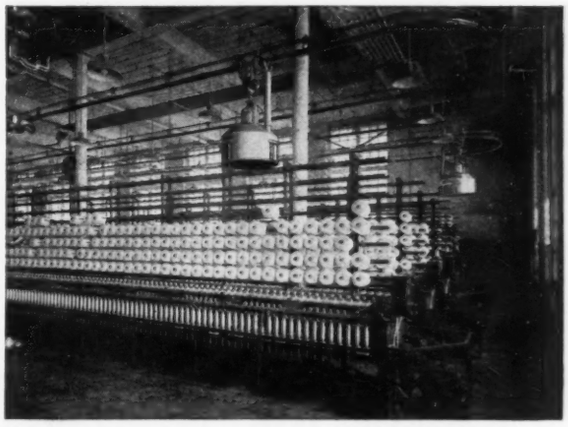
Automatic Cleaners over long draft spinning frames.



Cleaners over high speed winders.

Controlled CYCLONIC Cleaning

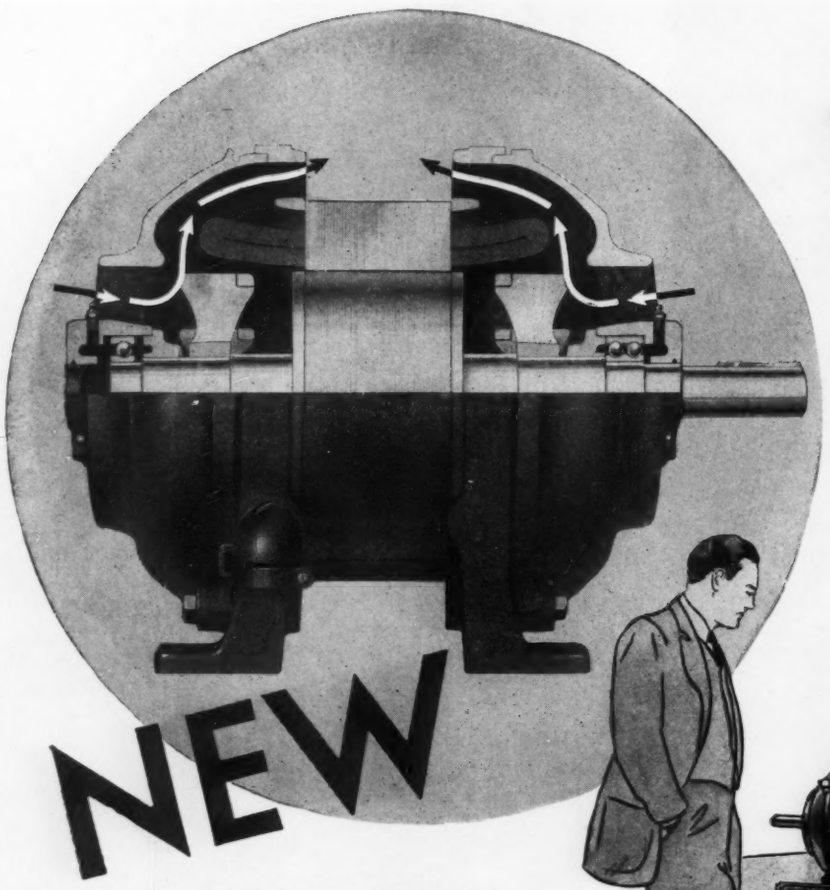
Over spinning, winding, twisting and warping machinery American MonoRail Automatic Cleaners demonstrate the effects of their cyclonic action. In every case a cleaner yarn is produced at a lower cost by the swirling action of its air currents which remove free lint before it accumulates. Let experienced textile engineers show you why American MonoRail equipment operates without interruption to cleaning intervals. Write for the new book explaining the advantages of Automatic Cleaning. Send your letter to The American MonoRail Company, 13106 Athens Ave., Cleveland, Ohio.



Cleaners over twister creels.

AMERICAN MONORAIL *Automatic* **OVERHEAD CLEANERS**

for Spinning, Winding, Spooling and Warping



Cutaway view of new G-E screenless open motor, illustrating air flow and size and location of fans

THIS MOTOR REMAINED CLEAN!

"THIS motor has been thoroughly tested under the worst lint conditions I could find and it remained clean!" So says a G-E engineer in describing the advantages of the new G-E screenless open motor—a motor with a ventilating system of advanced design.

1. The fans are so shaped and so placed on the shaft as to provide efficient fan action without whirls and eddies.

2. Any free lint or dust in the ventilating air is forced through *large, unobstructed* air passages and is effectively discharged through large openings in the stator frame.

3. The high G-E standard of motor efficiency and strong motor construction is maintained, assuring you of a dependable, effective drive.

For complete information on this new motor (7½ to 15 hp), get in touch with the nearest G-E office.

Dept. 6D-201
General Electric
Schenectady, N. Y.

Please send me the publication describing the new screenless open motor.

Name.....

Company.....

Address.....

City..... State.....

011-237

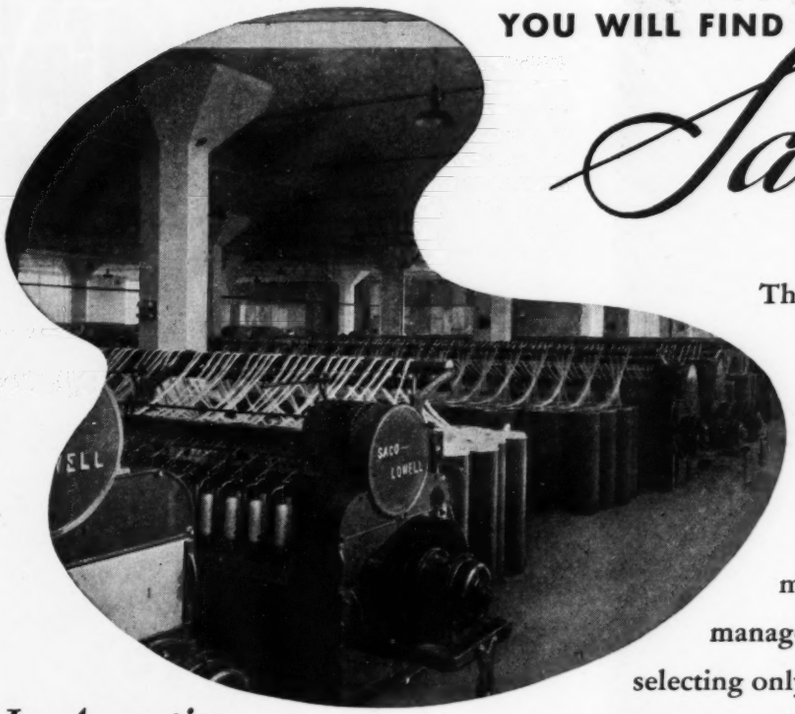
GENERAL ELECTRIC

ALL OVER THE WORLD . . . WHERE QUALITY IS PARAMOUNT

YOU WILL FIND

Saco-Lowell

EQUIPMENT



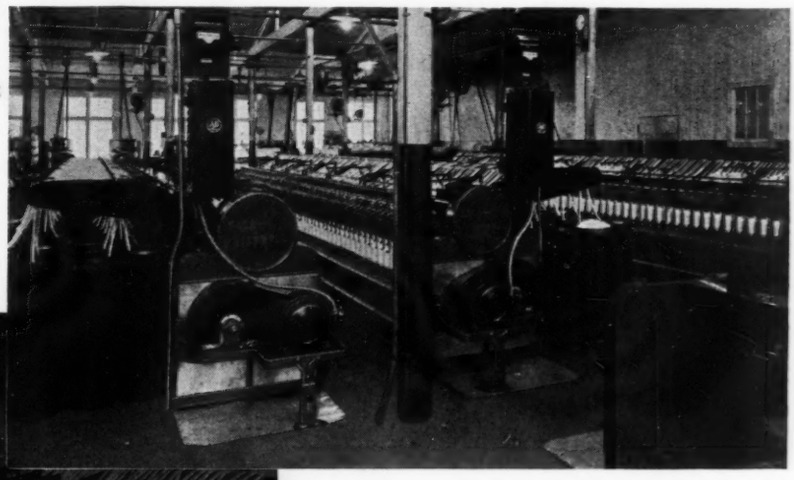
In Argentine . . .

The Long Draft Roving section in the S. A. Fabrica Argentina de Alpargatas.

The mill in the Argentine cannot afford to experiment when it decides to install new textile machinery. For such a mill, even the most efficient 'parts department' maintained by a manufacturer would be of little benefit in minimizing breakdown delays. Thus the management must choose wisely and carefully, selecting only that equipment which it knows in advance will perform efficiently and dependably under all conditions of service. ¶ Mills near and far have learned that they can rely implicitly on the dependability of Saco-Lowell equipment.

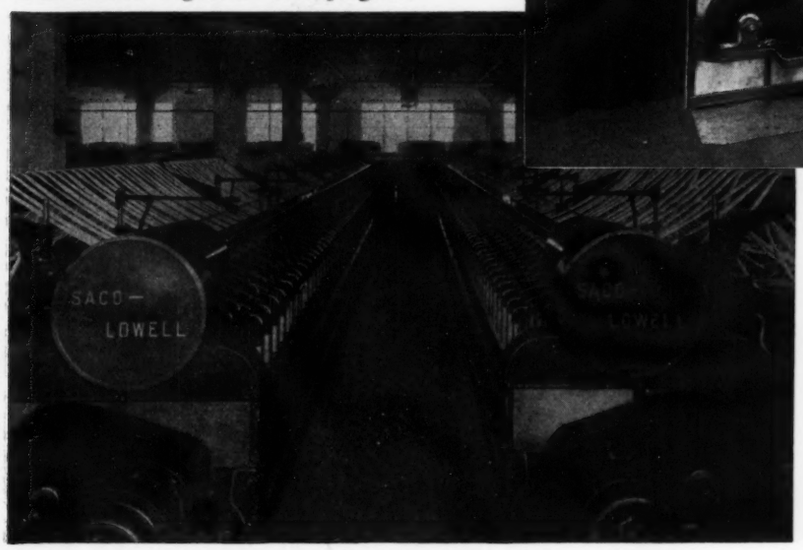
In South Carolina . .

Saco-Lowell Roving Frames in the Gluck Mills, at Anderson, South Carolina.



In Argentine . . .

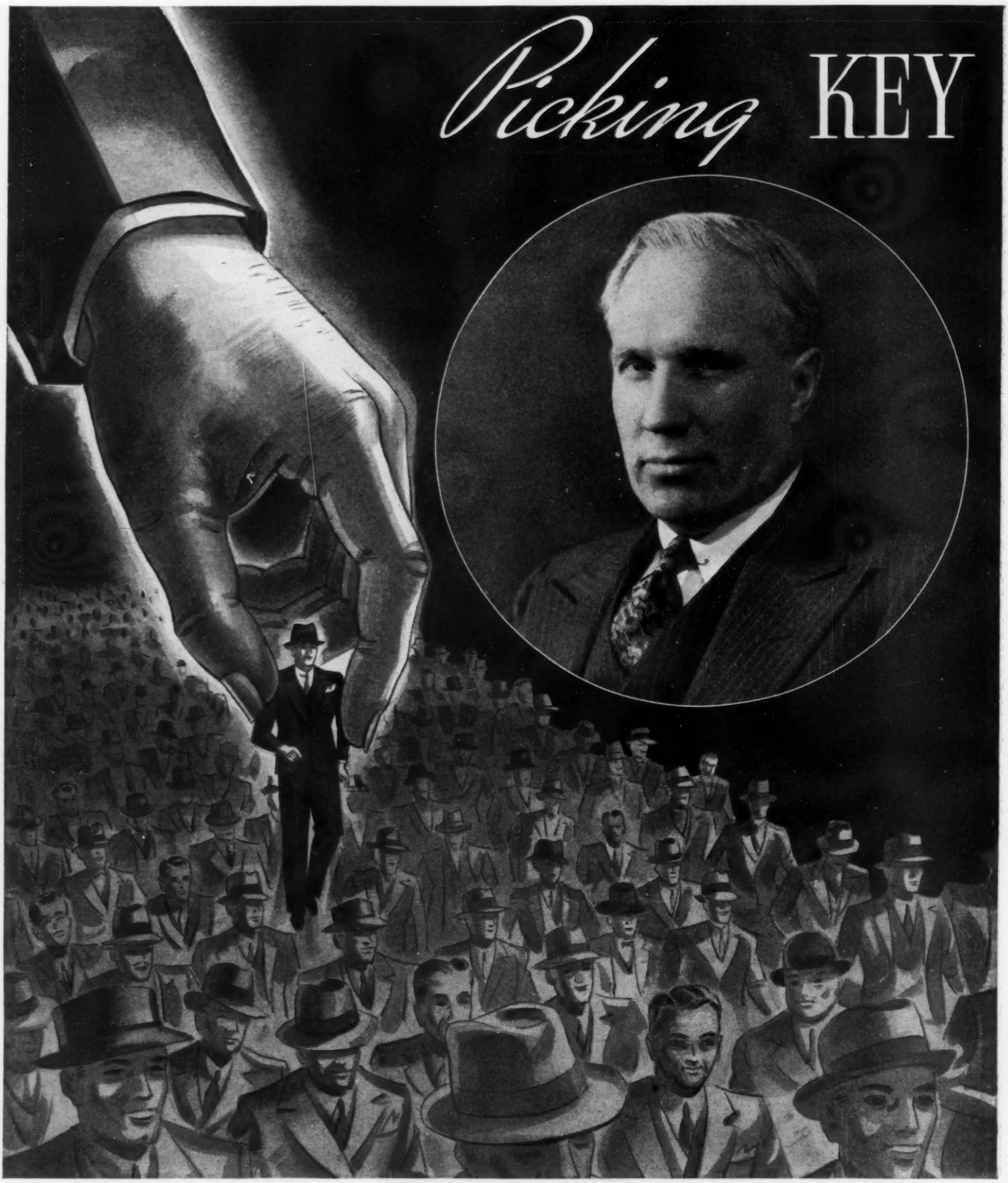
Down the alley between two Long Draft Roving Frames in the Card Room of S. A. Fabrica Argentina de Alpargatas.



Saco-Lowell Shops

147 Milk St., Boston, Mass.

. . . SAVE BY MODERNIZING



Since 1906, when he was the original and one-man sales force, Mr. Hitchcock has been an enthusiastic worker for the success of Reliance as an organization—and always with a keen interest in the accomplishments of its individual members.

MEN *at* RELIANCE

The most interesting work ever allotted to me is heading up the job of finding good men to be added to our organization. At first it was not easy to attract the men who met the standards which we set up. Men of their caliber were in a position to do some choosing—they were not easily convinced that Reliance presented an opportunity. Today, new men find here a group with engineering training, those who like themselves have been leaders among their fellows because of ability and because they are agreeable associates. Men like these have found opportunities at Reliance because they are always making them—by seeking ways for Reliance to design better motors, build them better, and to apply them in ways that bring faster production or improved quality. Key men of this type serve Reliance customers from sales through manufacturing.

—H Morley Hitchcock

Sales Vice-President and Treasurer

This loom motor is typical of results achieved by Reliance in matching improvements in textile production machinery and processes.

As looms have been stepped up to more picks a minute, users have placed a growing emphasis on mechanical ruggedness in the driving motor. That's why strength has been made the foundation for Reliance design . . . strength to withstand the rapidly recurring load peaks and continuous vibration inherent in high-speed loom operation.

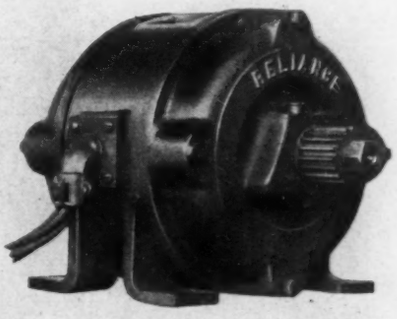
More and better material has been placed in vital spots. Improved insulation provides stator windings with greater resistance against heat and humid conditions. Rotor bars and end rings are cast as an integral unit of aluminum. Oil is kept in its proper place. A properly balanced electrical design insures high efficiency and power factor with low power cost. For more complete details write for Bulletin 303.

At our branch offices are capable Sales Engineers trained in the application of electric motors.

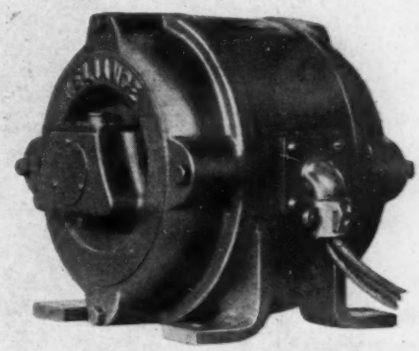
RELIANCE ELECTRIC & ENGINEERING COMPANY
1088 IVANHOE ROAD • CLEVELAND, OHIO

Branches: BIRMINGHAM • BOSTON • BUFFALO • CHICAGO • CINCINNATI
DETROIT • GREENVILLE (S. C.) • NEW YORK • PHILADELPHIA • PITTSBURGH

Representatives in Other Principal Cities



Type "AA" Reliance Loom Motor.



Another view of the same motor.

RELIANCE A-C D-C MOTORS

no blocked condensers

IN WESTINGHOUSE

Hermetically-Sealed

WATER COOLERS

You can't block the water-cooled condensers in Westinghouse Water Coolers. Dust, dirt, lint or other solids, inevitable in many manufacturing operations, can't stop these condensers . . . can't reduce your supply of properly cooled water . . . can't build up big cleaning or repair bills.

Other advantages that account for the wide dominance of Westinghouse Hermetically-sealed Water Coolers, for industrial and office use, are:

Hermetically-sealed units . . . lifetime lubrication.
Air-cooled or water-cooled mechanisms.
Brushless motors that won't burn out.
Improved Dual-action evaporators.
Non-clogging drains . . . sanitary bubblers.
Freon refrigerant . . . temperature selectors.
Westinghouse 5-year protection plan.

Yet Westinghouse Hermetically-sealed Water Coolers, with all these money-saving advantages, cost no more. See your local dealer, or write to Department 749, Westinghouse Electric & Manufacturing Company, Mansfield, Ohio.

Westinghouse

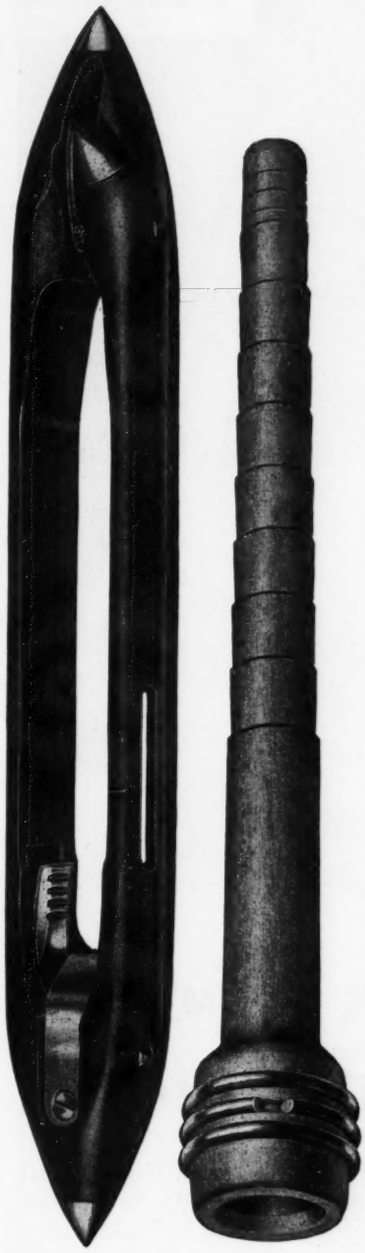
Hermetically-Sealed

WATER COOLERS

Freeze-proof and explosion-proof models for special applications

REMEMBER . . . WESTINGHOUSE GIVES YOU BOTH HERMETICALLY-SEALED UNITS AND THE 5-YEAR PROTECTION PLAN

FAVORED PRODUCTS
in Cotton Production



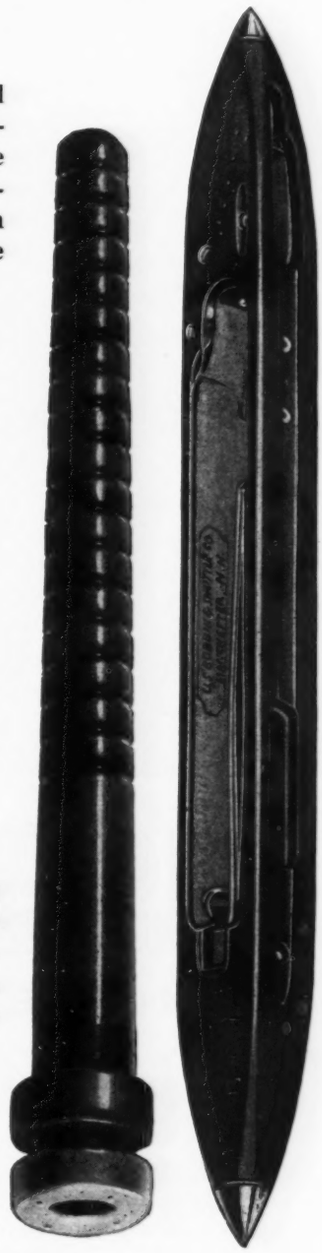
MANY years ago this company originated and perfected the Automatic Loom Bobbin and Automatic Shuttle to carry it. Since then, US engineers have continued to make improvements so that today US Automatic Loom Bobbins and Shuttles are conceded to be the standard of efficiency.

At the left: US Automatic Loom Shuttle with easiest threading eye. Shuttle can be furnished in Dogwood, Persimmon or Fibre covered. Bobbin shown is available in all types, finished with oil, shellac or enamel.

At the right: US Paterson Tension Shuttle for shuttle changing looms are accurately made in sets as desired. These also can be supplied in Dogwood, Persimmon or Fibre covered. Bobbin shown is one of the most popular types. Made to your own specifications, it is available in finishes for all conditioning purposes.

Regular cardroom bobbins. Also cardroom bobbins for super draft, spinning bobbins for long draft, cones, twisters and skewers. A complete line of spools including all wood also with metal binding or fibre heads suitable for all cotton mill purposes.

Ask our nearest representative for full particulars



U S BOBBIN & SHUTTLE CO.
MONTICELLO, GEORGIA

Charlotte, N. C., Greenville, S. C., Johnson City, Tenn.

BETTER BOBBINS • SPOOLS • CONES • SHUTTLES

1930
Stopped Looms - - - No Profits
WHEN you walk through your weave room, how many of your automatics are slumbering—marking time until the weaver can repair a warp break?
The spectacle of powerful, swift automatic looms just decorating the weave room is not at all a satisfying one. And neither does it add to a mill man's peace of mind to know that these interruptions oftentimes signify seconds in the finished goods.
Many mill men have reduced these costly breaks substantially. They have attacked the problem at the most vulnerable point—in the slasher room. The Tycos Slasher Control System not only has bettered weaving time and reduced seconds, but also has evened weights, insuring immediate shipments.
You owe it to yourself to investigate this notable system. Let us tell you what complete slasher control can do for you. Write today.
Taylor Instrument Companies
ROCHESTER, N. Y., U. S. A.
SLASHER CONTROL SYSTEM
Tycos for Guaranteed Results
1937

In 1930 this advertisement for Taylor (then "Tycos") Slasher Control appeared in leading textile magazines.

THE REMEDY IS STILL THE SAME

Taylor Automatic Slasher Control

EVEN BEFORE 1930 advertisements like the one reproduced above were giving wide-awake textile executives the answer to troublesome production problems. For more than a decade ago Taylor engineers pioneered slasher control systems.

TODAY, with added years of experience and a steadily growing record of successful operation, Taylor Slasher Control more than ever enjoys the prestige that is based on proven dependability. More than ever you can rely on Taylor engineers to show you the way to greater profits.

There's no guesswork about Taylor Slasher Control. It is a complete, unified system that controls automatically every step of the slashing process from size cooking to drying—planned, engineered and installed under the supervision of Taylor engineers—tailored to fit the particular needs of your mill and tested in operation before it is turned over to you.

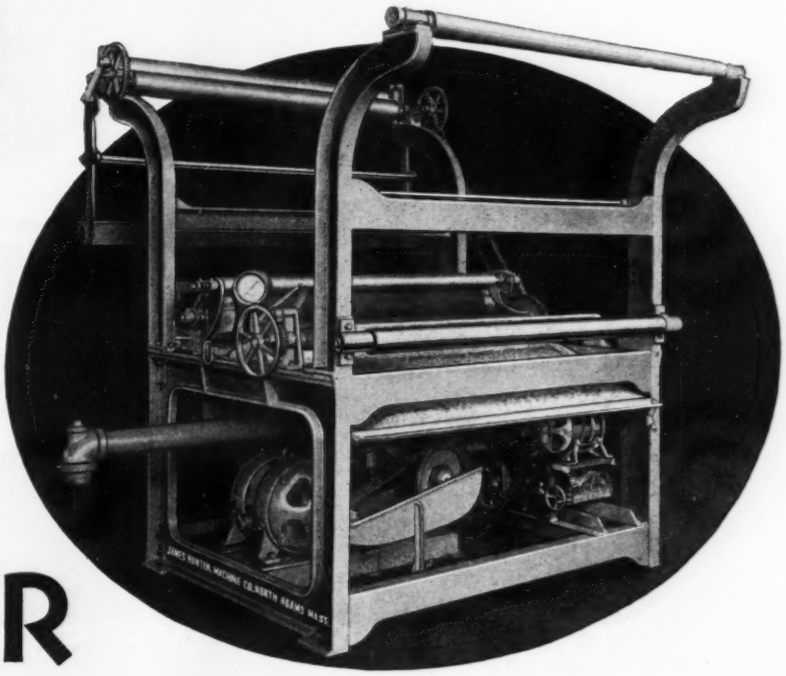
Each installation presents an individual problem, but every mill employing Taylor Slasher Control enjoys these same advantages: Increased speed of production, more uniformly sized warps, savings in raw materials, greater efficiency in the weaving room, and more uniform finished goods. In most mills Taylor Systems have paid for themselves within a year.

For full information about Taylor Slasher Control, ask a Taylor representative. Or write direct to Taylor Instrument Companies, Rochester, N. Y. Plant also in Toronto, Canada. Manufacturers in Great Britain—Short & Mason, Ltd., London, England.

Taylor

Indicating / Recording • Controlling

TEMPERATURE, PRESSURE *and* FLOW INSTRUMENTS



Only
HUNTER

Vacuum extracting systems give such continuous, rapid, uniform production.

Hunter Triple Slot Vacuum Mouthpiece offers all the operating advantages, and none of the mechanical difficulties, of the single adjustable slot.

Speed up your dryer production with Hunter Vacuum Extractors. Where the hydro operates intermittently, this extractor is continuous. It eliminates creases and hydro marks, extracts uniformly from selvedge to selvedge, unifies and speeds production.

Write today for Bulletin VE and latest data on the savings and advantages which mills enjoy from using this equipment.

Authorized Southern Agents

CAROLINA SPECIALTY COMPANY

122 BREVARD COURT, CHARLOTTE, N. C. Telephone Charlotte 2-0498

JAMES HUNTER MACHINE CO., *Since 1847* North Adams, Mass.

THIS MONTH WE SALUTE TUFFER Craftsmen

Quality craftsmanship is an ideal three score and ten years old at the Tuffer plant. Skilled workers are aided by the accumulated experience of over half a century of building high standards of quality into Card Clothing.

With the sensitive touch of an artist intent upon his masterwork, these Tuffer craftsmen focus the skill of years upon their daily task. From start to finish, from humblest job to most important responsibility and vital process, pride in Tuffer and belief in Tuffer quality guides their work as it guides Tuffer Card Clothing sales to greater heights.

The thousands of feet of finished Tuffer Card Clothing are the tangible elements you buy when you receive a shipment. But the most important things you never know about until the passing years have proved the high quality of Tuffer Card Clothing are the skill, the experience and the honesty of purpose that went with every inch of Tuffer in the making.

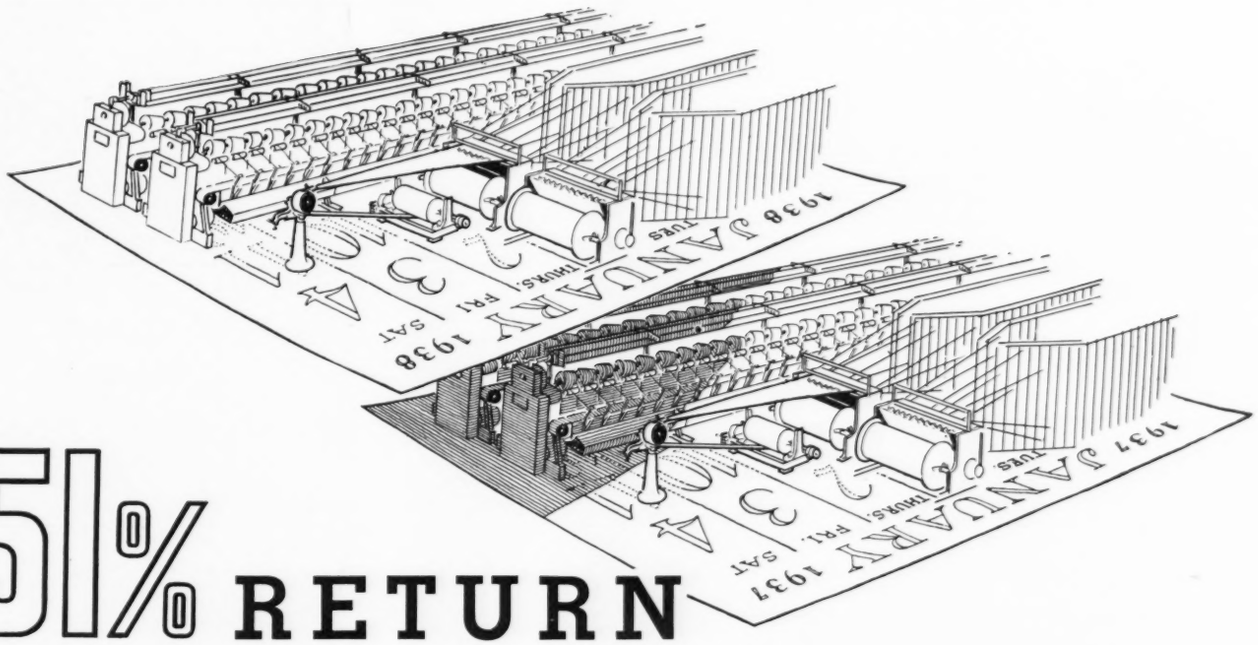
And so, this month, we salute our faithful workers.

HOWARD BROS. MFG. CO.

HOME OFFICE AND FACTORY WORCESTER, MASS.

Southern Plant: 944 Forsythe St., Atlanta **Branch Offices:** Philadelphia, Dallas

Products: Card Clothing for Woolen, Worsted, Cotton, Asbestos, and Silk Cards — Napper Clothing, Brush Clothing, Strickles, Emery Fillets, Top Flats Recovered and extra sets loaned at all plants — Lickerins and Garnett Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant — Midgley Patented Hand Stripping Cards, Howard's Special Hand Stripping Cards and Inserted Eye and Regular Wire Heddles

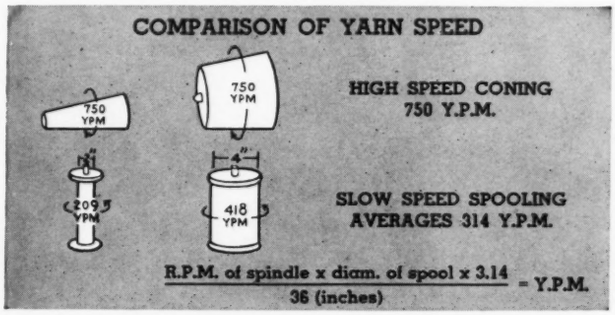


51% RETURN ON INVESTMENT!

Mill is paying for Universal High Speed Warping System in 2 years . . . out of Savings over Slow Speed System.

Introducing the new Roto-Coner into the Universal System of High Speed Coning and Warping has brought new possibilities for savings when replacing slow speed systems.

In one mill, four 100-spindle Roto-Coners operating at 750 y.p.m., replace more than 1500 spindles of slow speed spooling averaging 316 y.p.m. (see chart). The higher winding speed also throws out more trash, and thereby produces better-quality yarn.



In addition to increased winding speed, the flexibility of the Roto-Coner allows more than one count of yarn to be wound at once, spindle assignments being arranged with maximum operator and machine efficiency.

Other new features of the Roto-Coner . . . its silent head end with V-belt drive, its improved slubbing, its all-enclosed parts, the horizontal thread line and the empty bobbin conveyor for each side of the winder . . . all contribute to better and more economical winding.

Additional savings are made at the creel, where magazining of the cones gives the warper a continuous supply of yarn without stops for creeling. The extra cone holder for each warping end also saves time when yarn counts are changed; the cones can be loaded and unloaded while the warper is running.

In this mill, four high speed warpers replaced seventeen slow speed warpers, and each high speed warper is tended by one operator who can take care of the front and do her own creeling.

INVESTMENT	
4 winders, 4 combination beam and ball warpers	$31,000
SAVINGS, including depreciation and maintenance	$16,000
RETURN ON INVESTMENT . .	51%

In 3 out of 4 mills, the Universal System, having the lowest investment, depreciation, and maintenance, will produce the greatest net return of any high speed system.

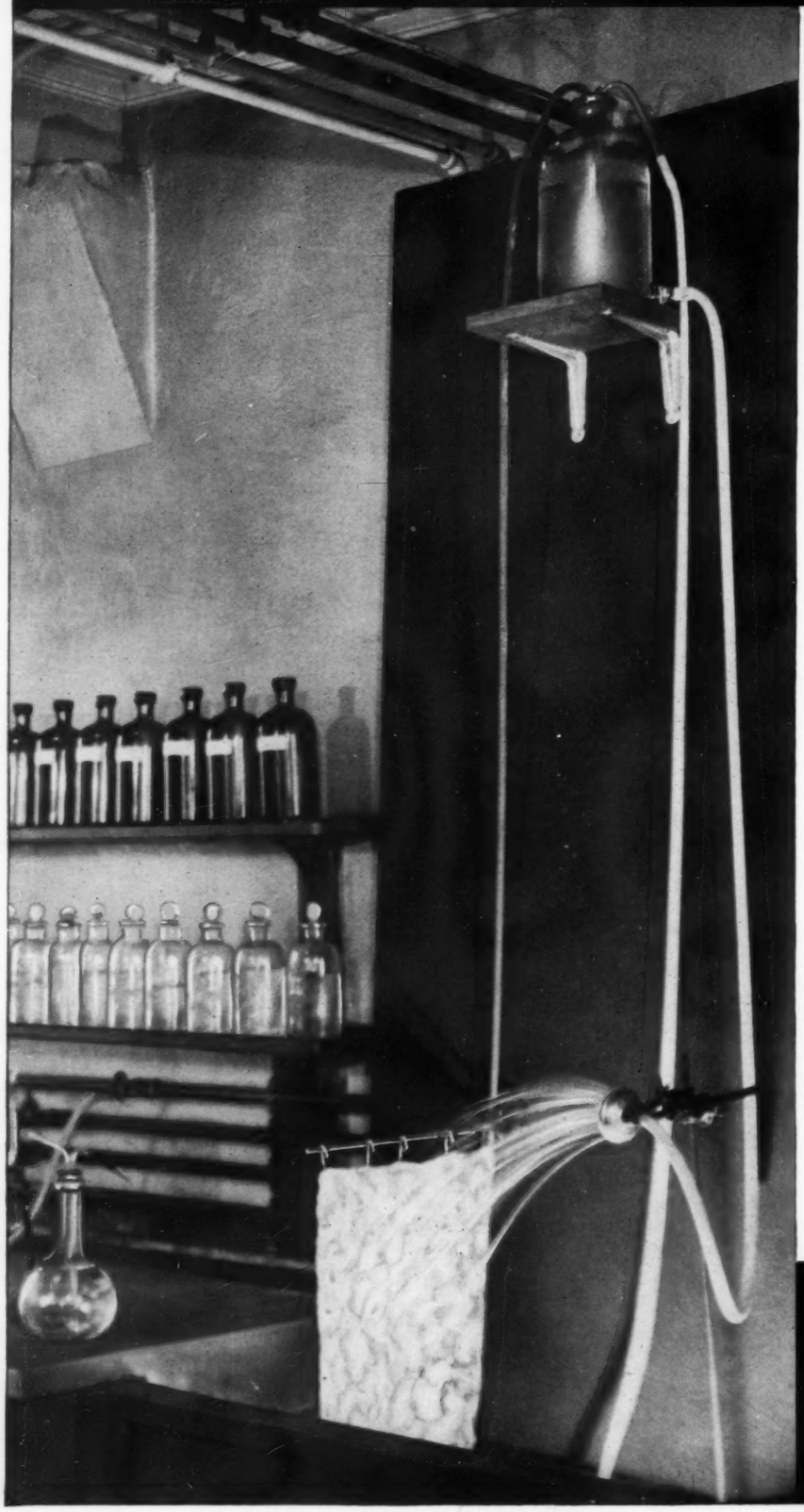
UNIVERSAL WINDING COMPANY

NEW YORK · PROVIDENCE · BOSTON · UTICA · CHARLOTTE · ATLANTA

PUT TO A

MORE SEVERE TEST

..THAN THE CONSUMER WILL GIVE IT!



SCIENTIFIC TESTS . . not guesswork . . prove **AQUAROLS's** effectiveness!

Specify AQUAROL for truly water-repellent silk, rayon, wool and cotton piece goods!

Specify AQUAROL for really spot-proof hosiery!

Specify AQUAROL . . . and the CONSUMER will *specify your* fabrics!

Get REAL Water-Repellency . . Get

AQUAROL

REG. U.S. PAT. OFF.

ARKANSAS CO. INC.

233 BROADWAY • NEW YORK

ARE THEY TOUGH?
ARE THE EYES SMOOTH?
HOW GOOD IS THE PLATING?
HOW LONG WILL THEY WEAR?
Certified STEEL HEDDLES manufactured by a process insuring smoothness of eye, long wear, high tensile strength, durability and corrosion resistance of plating. Heddles purchased in open market are examined and tested periodically by
PITTSBURGH TESTING LABORATORY
as an independent check upon Emmons' standards of manufacturing control.
EMMONS LOOM HARNESS COMPANY
LAWRENCE, MASSACHUSETTS

You need to know these things before
you can be sure of freedom from chafing—
better weaving—uniform warp tension—fewer warp breaks

. . . . Your Answer is the "CERTIFIED" Tag!

Emmons tells you beforehand what you'll get when you buy "Certified" Steel Heddles — by making public each month, in this magazine, reports of tests made by the Pittsburgh Testing Laboratory.

The P.T.L. tests are an independent check on Emmons standards of manufacturing quality — your assurance of smooth heddle eyes — long wear — high tensile strength — durability and corrosion resistance of plating . . . *all* necessary for better weaving on your looms.

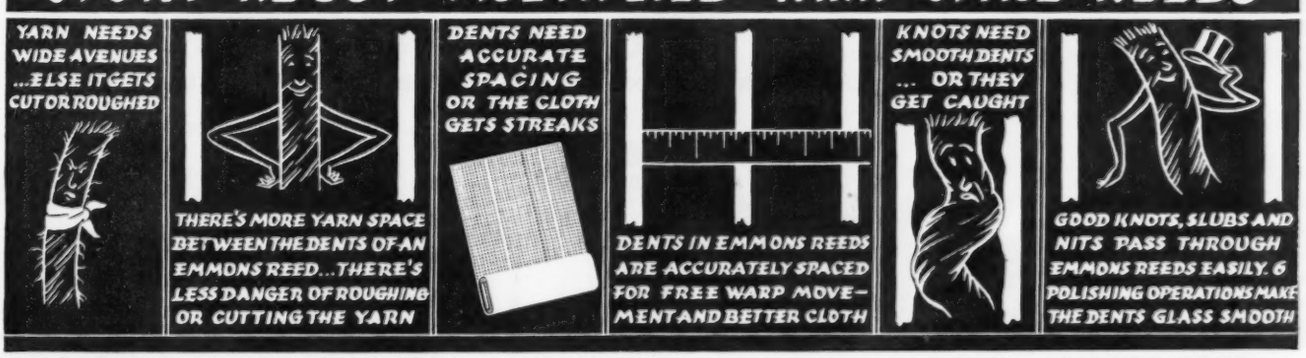
Tests already published have shown how "Certified" Steel Heddles were pulled until they broke at the eye, so that *you* could know their high tensile strength. They were bent 100,000 times — *without breaking!* Cadmium plated heddles were sprayed with a ruinous salt spray for 168 hours — *and they didn't rust!* And the eyes were sawed with threads — to prove how smooth they are.

Month to month, as new tests are made by P.T.L. — from heddles purchased in the open market — we'll make them public to you. *Know* what you buy. Specify the heddles with the "Certified" tag! Quick delivery. Emmons Loom Harness Company, Lawrence, Mass.

Emmons

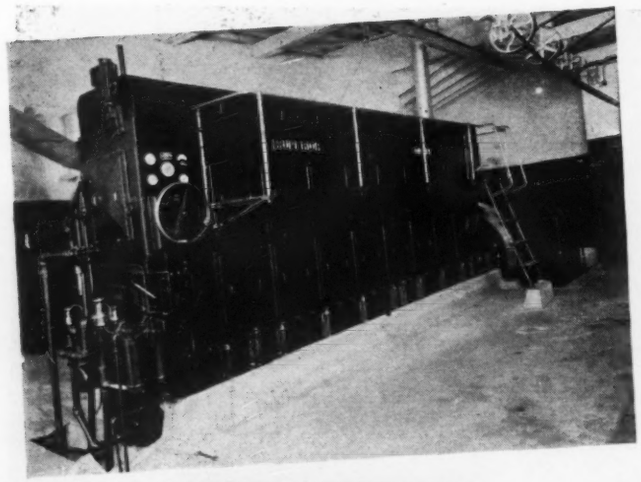
"CERTIFIED" STEEL HEDDLES

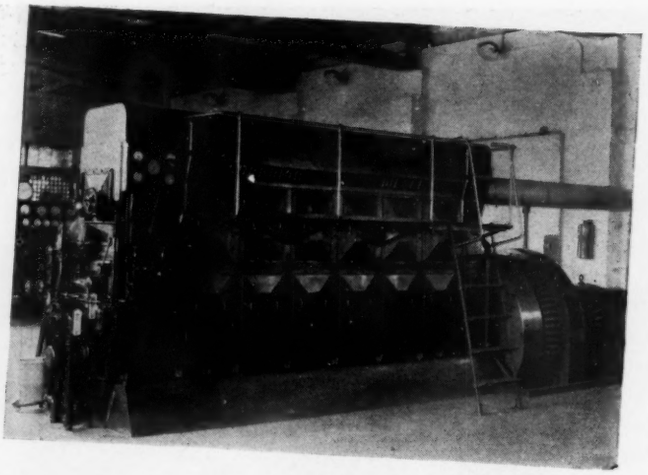
STORY ABOUT "MULTIPLIED YARN SPACE" REEDS

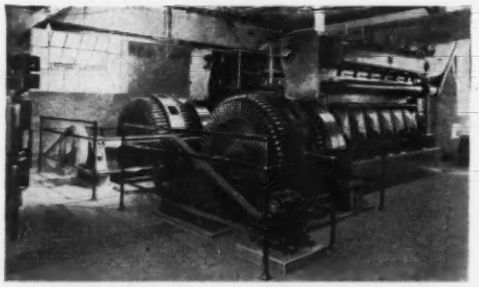

YARN NEEDS WIDE AVENUES ...ELSE IT GETS CUT OR ROUGHED
THERE'S MORE YARN SPACE BETWEEN THE DENTS OF AN EMMONS REED...THERE'S LESS DANGER OF ROUGHING OR CUTTING THE YARN
DENTS NEED ACCURATE SPACING OR THE CLOTH GETS STREAKS
DENTS IN EMMONS REEDS ARE ACCURATELY SPACED FOR FREE WARP MOVEMENT AND BETTER CLOTH
KNOTS NEED SMOOTH DENTS ... OR THEY GET CAUGHT
GOOD KNOTS, SLUBS AND NITS PASS THROUGH EMMONS REEDS EASILY. 6 POLISHING OPERATIONS MAKE THE DENTS GLASS SMOOTH

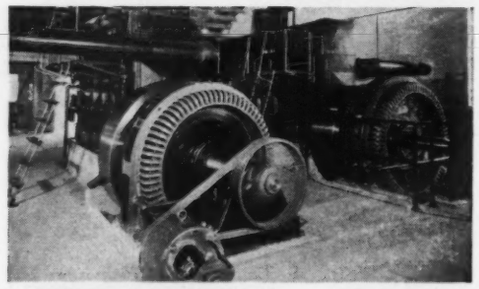
"CERTIFIED" STEEL HEDDLES, "MULTIPLIED YARN SPACE" REEDS, "CHAFELESS CORD"
COTTON HARNESS described in Textile World Yearbook

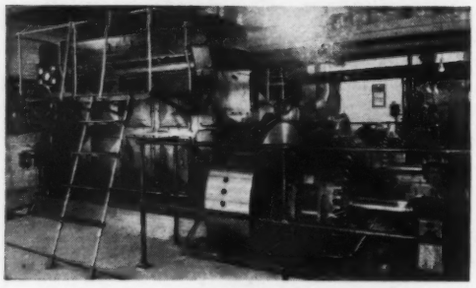
6630











Typical Superior Diesel plants in diversified industries producing power from ½ cent to 1 cent per kilowatt hour and saving from one to several thousand dollars monthly for their owners.

SUPERIOR Diesels are the ideal power units for the textile mill.

They are cleaner, safer, and simpler to operate than steam units. With them, you pay only for actual power used. They operate continuously under high load factor with highest efficiency and with uniform speed that means uniform quality and quantity production. Operating labor cost is reduced to a minimum. Waste heat recovery will supply large quantities of hot water.

All in all, the advantages are so great that you cannot afford to continue with obsolete steam plants, or rely upon hydro plants of high upkeep expense and seasonal water shortage, or with electric power purchased at several times its cost of production with dependable Superior Diesels.

Let our Engineers explain how our engines pay for themselves from savings they effect. Service is free.

THE NATIONAL SUPPLY COMPANY
OF DELAWARE
SUPERIOR ENGINE DIVISION
LOS ANGELES, CALIFORNIA SPRINGFIELD, OHIO PHILADELPHIA, PA.

Superior DIESELS

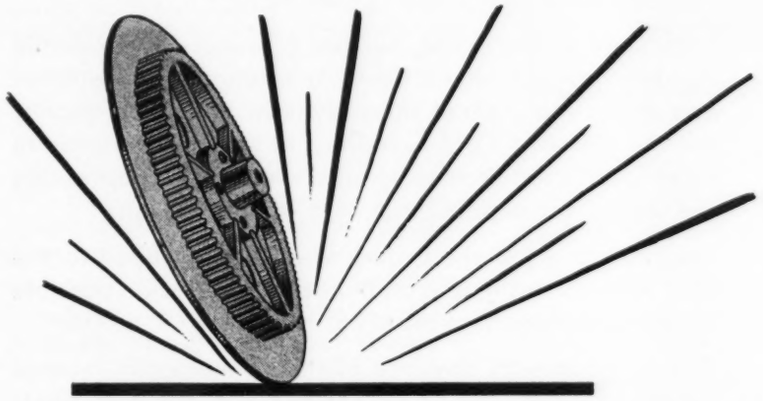
HEAVY DUTY MODELS: 50 to 810 H.P., 250 to 720 R.P.M. • HIGH SPEED MODELS: 15 to 150 H.P., 900 to 1800 R.P.M.

They can TAKE IT!

YOU can treat our Etchison Steel Beam Heads ROUGH! They can stand the gaff of the hardest treatment!! Of course, no one would deliberately throw a beam head on the floor, but should one accidentally fall, it would not break.

Etchison Patented Steel Heads
For Loom Beams and Warper Beams

Etchison steel heads are made in such a way that there is a protective shield for the gear or the friction on the back side. They are practically indestructible. It is true that they cost more than cast iron heads, but they are worth the difference, as they save not only on breakage but the expense due to loss of a warp caused by broken beam heads.



MANY mills are using West Point loom beams because they thereby increase the efficiency of their weave rooms. Many also are changing from cast iron heads to Etchison patented steel heads.

You can put **"Old Man Efficiency"** in your weave room with West Point Loom Beams, and you can cut down on losses by the use of Etchison Steel Heads.

■ **Also manufacturers of WEST POINT SIZING VATS, WEST POINT SPIRAL GEARS, WEST POINT BEAM RACKS and other textile machinery, and repair parts.**

WEST POINT FOUNDRY & MACHINE CO.

(Batson-Cook Company, Owners)

WEST POINT, GEORGIA

MEN WHO "KNOW THEIR KNITTING"

Buy their coal as carefully as they buy their needles

Textile leaders numbered among the customers of the General Coal Company know that the right fuels "keep profits from going up the chimney"—and that the *right fuels* are *those best suited to their jobs!*

Each year an increasing number of buyers in the textile industry turn to General Coals as a source of production economies that reflect themselves in increased profits. For the General Coal Company has various brands to meet various requirements—and every brand represents the utmost for a particular field of application.

Are *you* using the one brand of coal best suited to the job? Are you cashing in on the economies made possible by a modernized fuel supply?

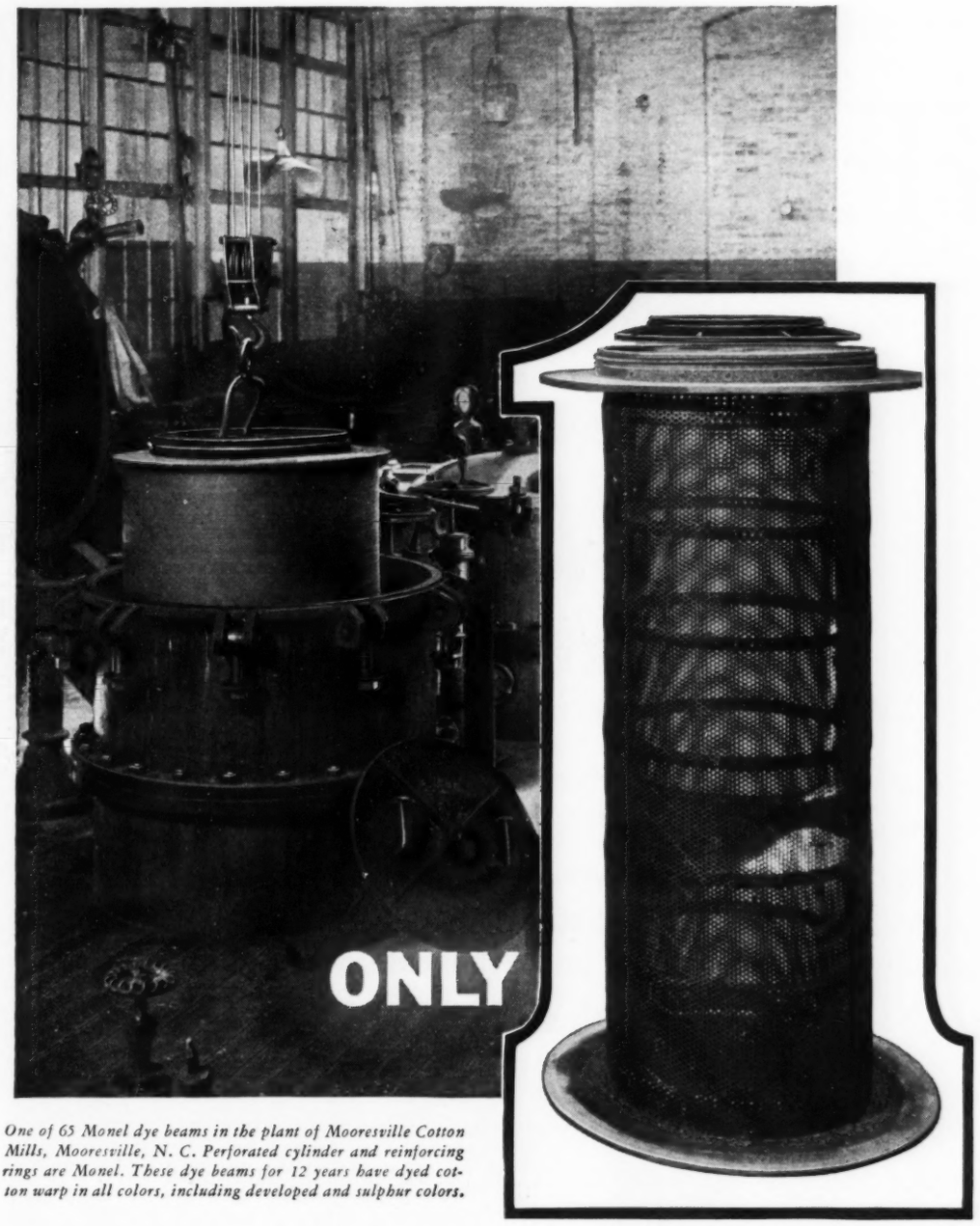
Get in touch with any one of the conveniently located General Coal Company offices for the full facts about a complete range of brands and sizes for every fuel requirement.

CRITERION COAL
PREMIX STOKER
GENCO
RODA
Admiralty Coal
STONEGA
DEPENDABLE ANTHRACITE
CROZER
DENDRON

GENERAL COAL

GENERAL COAL COMPANY
PHILADELPHIA, PA.

BOSTON CHARLOTTE, N. C. CHARLESTON, S. C. DETROIT CINCINNATI NEW YORK PITTSBURGH BUFFALO IRWIN, PA.



One of 65 Monel dye beams in the plant of Mooresville Cotton Mills, Mooresville, N. C. Perforated cylinder and reinforcing rings are Monel. These dye beams for 12 years have dyed cotton warp in all colors, including developed and sulphur colors.

OF 65 MONEL DYE BEAMS *all standing up after* 12 YEARS!

● Check up on *your* dye beams. How many can you count that turn out flawless work after 12 years? In the plant shown here, 65 dye beams installed 12 years ago are still dyeing cotton warp every day.

And every day the owners realize more clearly why Monel* is known as "the standard corrosion resistant metal for the dyehouse." Such a record, of course, does require high resistance to corrosion. But it takes far more than that:

Monel has more than that to offer. It is stronger than steel and tougher. It is rust proof. And its smooth hard surface simply doesn't absorb dyes. You waste little time in clean ups when changing colors.

And of course Monel didn't win its fame by serving only in dye beams. Wherever your fabrics touch corrosives: in skein and package dyeing equipment, vats, extractors, dye sticks . . . there you find Monel.

For Monel is readily fabricated by all standard methods, and is available from stock in all mill forms. Write to-day for full details and prices.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 WALL STREET NEW YORK, N. Y.

• • •

*Monel is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. This alloy is mined, smelted, refined, rolled and marketed solely by International Nickel.

MONEL INCO MONEL

FIFTEEN YEARS AGO

Before the introduction of Single Process Picking, it would have been difficult to find a cotton mill that would use breaker laps on the cards. No lap made directly from loose cotton was considered good enough for carding.

TODAY

Many mills use Single Process Pickers which make laps out of loose cotton. That is, they make breaker laps for the cards.

There is nothing to prevent a breaker lap being just as even yard by yard as a finished lap, but the cotton is not as well distributed and the lap will not produce an even sliver. Remembering that a yard of 14-oz. lap after being carded is going to stretch out into about 12 miles of 30's yarn, it is easily seen that yard by yard evenness amounts to nothing unless the cotton is well distributed in every direction throughout the lap.

We do not believe that carding a breaker lap is any sounder practice in 1937 than it was in 1922, and our Single Process Picking System employs the old principle of using a good even lap to make a better, evener lap for carding.

During the past year we have rebuilt to our system quite a number of Single Process Pickers making laps directly from loose cotton fed to the finisher sections, and have consistently found that Synchronizing these pickers results in more uniform sliver and roving.

AldricH MachinE

Greenwood, WorkS South Caroline

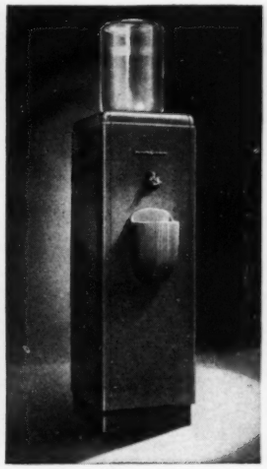
THE WATER COOLER *Specially designed* FOR TEXTILE MILLS

ENGINEERS of General Electric's world-famed research laboratories designed this water cooler, with *lint-proof* mechanism, especially for use in textile mills. It's a heavy duty cooler . . . with extra large capacity . . . engineered for strenuous service. Equipped with the famous automatic pre-cooler, foot pedal control, contamination proof bubbler, anti-splash bubbler basin and other important improvements. All steel cabinet with insulation sealed-in-steel. Built for years of low-cost, dependable operation.

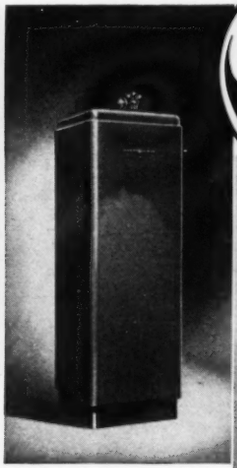
See the complete General Electric Water Cooler line before buying any water cooling equipment. It will pay you! Write *today* for free catalog. General Electric Company, Commercial Refrigeration Division, Section TC7, Nela Park, Cleveland, Ohio.

(above) **Model RM-71** with lint-proof mechanism. (below) **Model KM-71**, designed for severe industrial applications.

Model RM-11. Faucet type. For connection to local water supply.

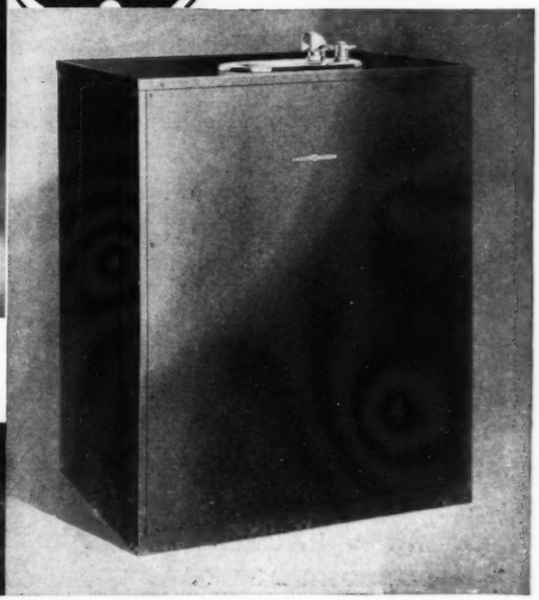


Model BM-11. Water bottle type. Just plug in to any light socket.



Model RM-12. For offices. Bubbler type. Sensationally low priced.

Three new low-priced models for offices, reception rooms, etc.



GENERAL ELECTRIC
Water Coolers

. . is Rapidly Becoming Industry's Favorite Belt

THE demand for Republic's Challenger Square Edge Belt has increased so rapidly that it has become the outstanding belting for general use. The reasons for its popularity are not difficult to find.

Challenger is a highly efficient belt. Its great strength and pulley-gripping ability mean more power transmitted, lower costs, fewer adjustments. It combines resilience and flexibility with low stretch, maintaining an even, moderate tension for long periods without take-ups.

Made in roll lengths or endless to specifications, Challenger is available at all Republic Distributors.

REPUBLIC RUBBER

Manufacturers of HOSE
BELTING • PACKING
MOLDED PRODUCTS

Division LEE RUBBER AND TIRE CORPORATION
YOUNGSTOWN • OHIO

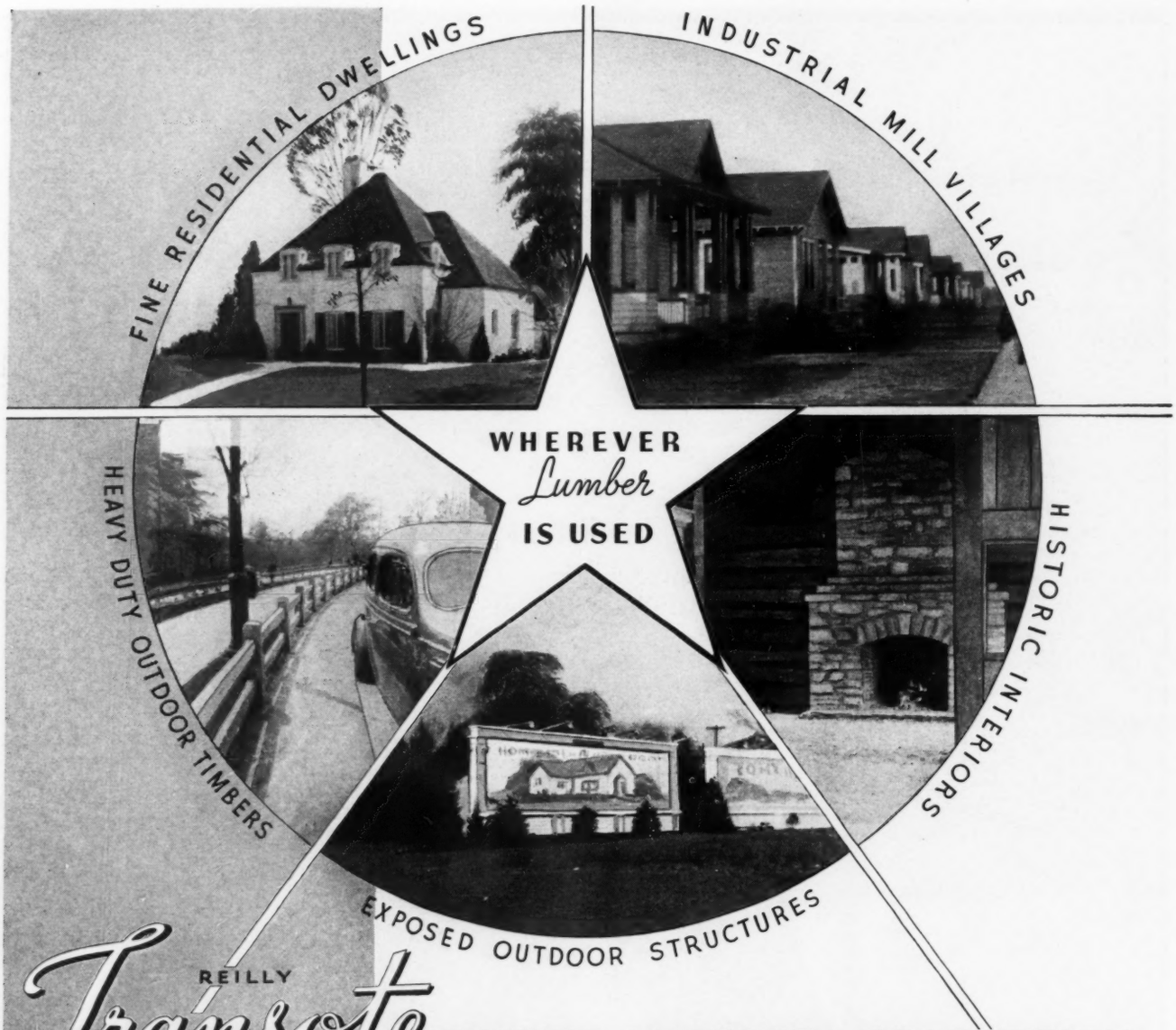
ORDER REPUBLIC RUBBER PRODUCTS FROM YOUR DISTRIBUTOR

• Material finished with GDC dyestuffs will always satisfy the experienced shopper

GDC

GENERAL DYESTUFF CORPORATION

435 HUDSON STREET · NEW YORK, N. Y.



REILLY

Transote OFFERS MAXIMUM PROTECTION

Termites and decay will attack unprotected wood regardless of where it is used . . . mansion or cottage . . . sturdy outdoor timbers or fancy indoor trim . . . none is immune to destruction by insects and fungi.

Transote, a clear, transparent, penetrating creosote is easily applied to infested properties or to construction lumber. It is highly toxic to termites and fungi but harmless to human life. Transoted wood can be worked exactly as untreated lumber . . . it can be shaped, planed or sawed, or it can be finished in any surface coating.

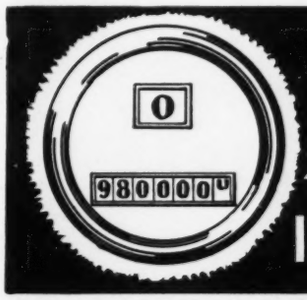
Transote offers dependability, economy and permanency in solving the problem of wood preservation.

For Wood Preservation Problems Consult Reilly . . . Our Services and Facilities Are Yours To Command.

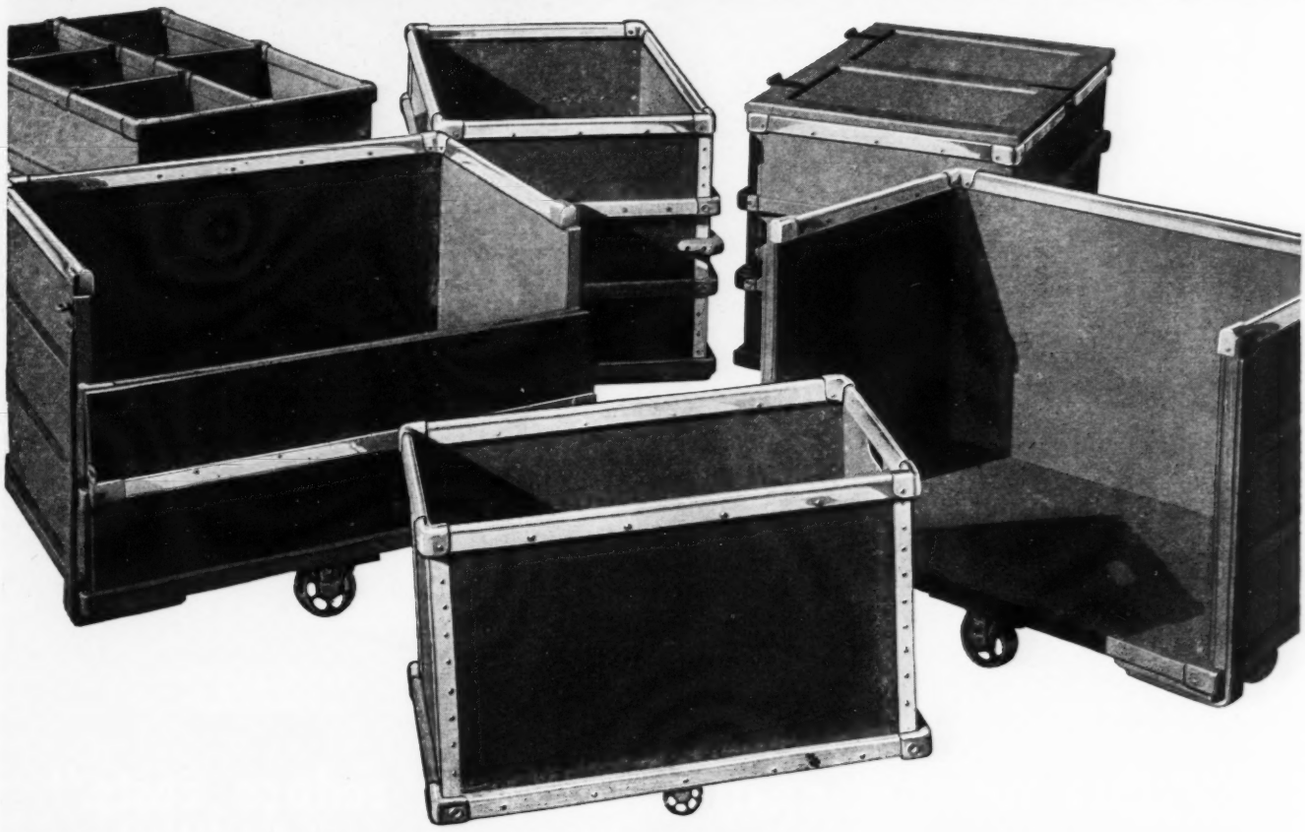
REILLY TAR & CHEMICAL CORPORATION

EXECUTIVE OFFICES: MERCHANTS BANK BUILDING, INDIANAPOLIS, INDIANA

2513 SO. DAMEN AVE. CHICAGO, ILL. | 500 FIFTH AVENUE NEW YORK, N. Y. | ST. LOUIS PARK MINNEAPOLIS, MINN.



More Mileage
IN YOUR MATERIAL HANDLING



DIAMOND FIBRE TRUCKS

MORE "mileage" in the form of longer, trouble-free life is assured when your material handling is entrusted to DIAMOND FIBRE Trucks, because every one of them is of the same perfectly smooth, scuff-proof, splinter-proof construction. Remember too, that Diamond Fibre is lighter than aluminum and almost as strong as iron, is non-corrosive and grease and oil proof. All metal parts are heavily plated to resist corrosion.

A number of standard types are made that will meet practically any material handling problem. Special types and sizes to meet particular problems can be made to order without extra cost.

Use the coupon today and get your copy of the catalog showing the complete line of Diamond Fibre Hollow Ware. Address Continental-Diamond Fibre Company, Department C., Newark, Delaware. In Canada the Diamond State Fibre Co. of Canada Ltd., Toronto.

DIAMOND FIBRE HOLLOW WARE
TRUCKS - BOXES - CANS - BASKETS - TRAYS

CONTINENTAL-DIAMOND FIBRE COMPANY
Dept. "C", Newark, Del.

☐ Please send catalog ☐ Have Salesman call

Name .....

Company .....

Address .....

City and State .....

THE Gulf engineer is always welcome in our mill," says this mill manager. "He helps us get highest efficiency from our equipment."

It's not his ready and tactful cooperation alone that makes the Gulf engineer a welcome visitor to this and many another textile plant. The results of his work show up in lowered repair bills and better performance from every machine in the mill. No wonder the door is always open to him!

With years of training and experience in scores of plants as a background, the Gulf engineer is prepared to recommend the proper lubricants and best application methods for the equipment in your plant. The Gulf line includes more than 400 quality oils and greases. The combination of this quality line of lubricants, plus Gulf's engineering counsel, help you attain maximum efficiency for every machine in your plant.

Any textile mill operator can have the benefit of this high type of lubrication service. It is extended to all users of Gulf quality lubricants—from Maine to Texas—without charge.

GULF OIL CORPORATION GULF INDUSTRIAL LUBRICATION GULF REFINING COMPANY

GENERAL OFFICES: GULF BUILDING, PITTSBURGH, PA.

MAKERS OF GULF NO-NOX ETHYL GASOLINE AND GULFPRIDE OIL

Why a Whole Day's Pay for a Part-Time Spinner?

It's the old textile game. Spinners—drawing down full pay for spinning—spend a good deal of their time cleaning. Doing—in other words—non-productive work. And don't blame the spinners either. For the frame must be kept clean.

But suppose the spinners stick to their own job and the cleaning is done automatically—*efficiently*—by a Parks Automatic Traveling Cleaner. Then spinners become full-time workers. Stop and go production gives way to steady output. Slugs, gouts, bunches are eliminated. Breakage, loom stoppage, seconds are reduced. Your spinning room cost sheet has a steadier pulse.

With two types of Parks Automatic Traveling Cleaners available, installation difficulties are overcome. One — the Parks Turbo Traveling Cleaner — is mounted on creel boards or rods; the other — the Bunchless Automatic Cleaner—runs on single rails suspended from the ceiling. Both give the same results.

Both are automatic — clean as they travel; pay dividends as they clean. For complete information, send coupon or write, today.

Gentlemen: Please send me Bulletins on Parks Automatic Cleaners ☐
☐ You may have an engineer call
(Please check)

Name .....
Company .....
Address .....
City .....
State .....

PARKS
Traveling Cleaners

PARKS-CRAMER CO., FITCHBURG, MASS . . . CHARLOTTE, N. C.

INTRODUCING...

Greater lighting efficiency with the new

HORIZONTAL

COOPER HEWITT *Lamps*

22% more light per watt . . . instant starting . . . high power factor . . . plus the long, detail-revealing light source which more than a million workers and their employers now enjoy. They are all yours in the new Horizontal Cooper Hewitt Lamps.

These "24-hour skylights" of low intrinsic brilliancy need no diffusing medium. The soft long-source light gets down into deep recesses, illuminates vertical surfaces and rests the eyes. All jobs are made easier —wherever sight is used.

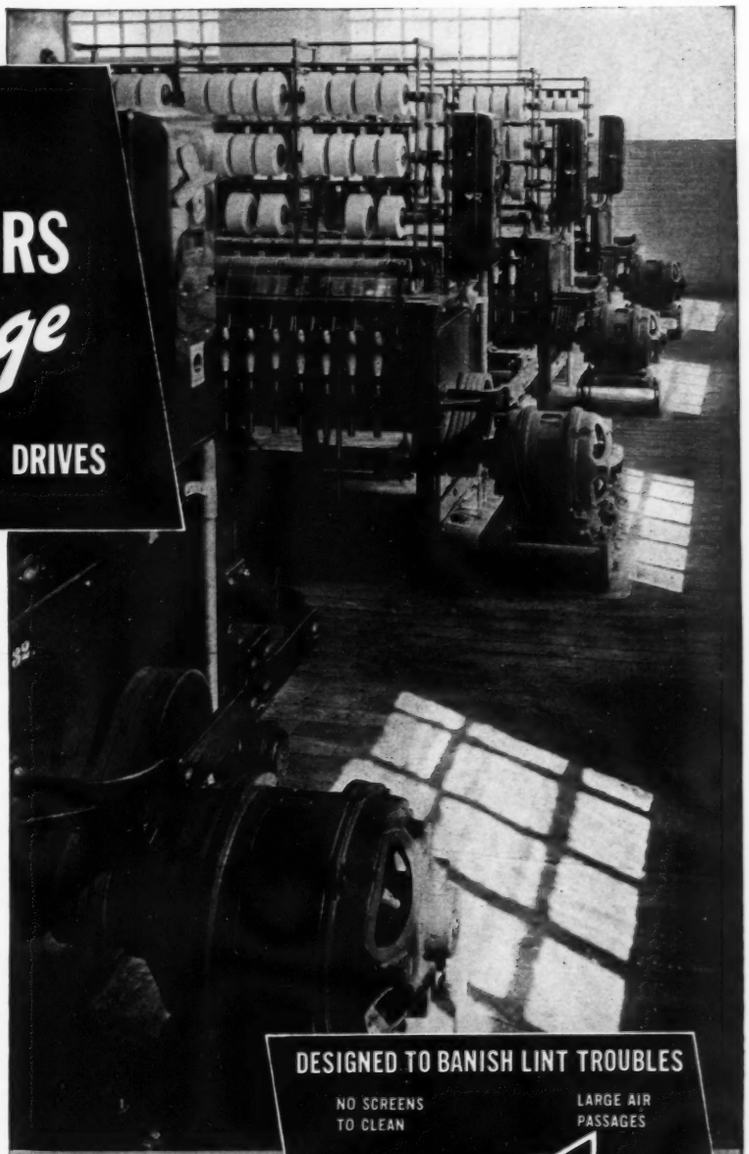
Get the complete story of these new lamps. Let us explain why you can run many more of these light units per circuit with no increase in copper. Write for Bulletin 827DM. General Electric Vapor Lamp Company, 853 Adams Street, Hoboken, New Jersey.

GENERAL ELECTRIC

VAPOR LAMP COMPANY

826

Westinghouse LINT-FREE MOTORS MEAN ★ More Mileage FOR YOUR MACHINERY DRIVES



★ LONGER DEPENDABLE SERVICE

For More Mileage textile drives Westinghouse Lint-Free Motors provide:

1. Specially tapered rotor vanes, against which lint cannot pack, and which circulate air at a velocity that will remove lint.
2. Windings, and other surfaces exposed to lint, that are glass-smooth.
3. Large air passages.
4. No screens to require cleaning.

These features fit Westinghouse Lint-Free Motors especially for textile mill service.

OTHER TIME-PROVED ADVANTAGES

HIGH EFFICIENCY—Designed for minimum power consumption.

DUAL PROTECTED WINDINGS *with taped end turns*—protected mechanically and electrically against damage, yet allowing easy dissipation of heat.

LOW MAINTENANCE BEARINGS—Sealed Sleeve Bearings that keep clean oil in, dust, dirt and grit out—or ball bearings.

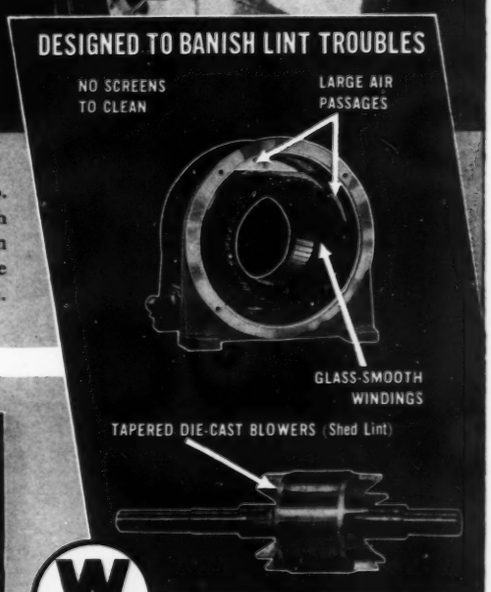
THERMOGUARD PROTECTION—making motors self-protecting against overheated windings can be applied to lint-free motors.

For complete information call your nearest Westinghouse Office or Industrial Agent.

Westinghouse Elec., East Pittsburgh, Pa.

J 20361

Westinghouse 7½-hp. Lint-Free Motors with "De-ion" Combination Linestarters drive these Saco-Lowell twisters.



"DE-ION" LINE-STARTER—Most important forward step in entire history of motor control equipment.

LOOM MOTORS—Extra strength high efficiency, and long-life bearings for high-speed loom operation.

WK-18 STARTER—Guards loom motor against damage from overloads. Safely and quickly reset.

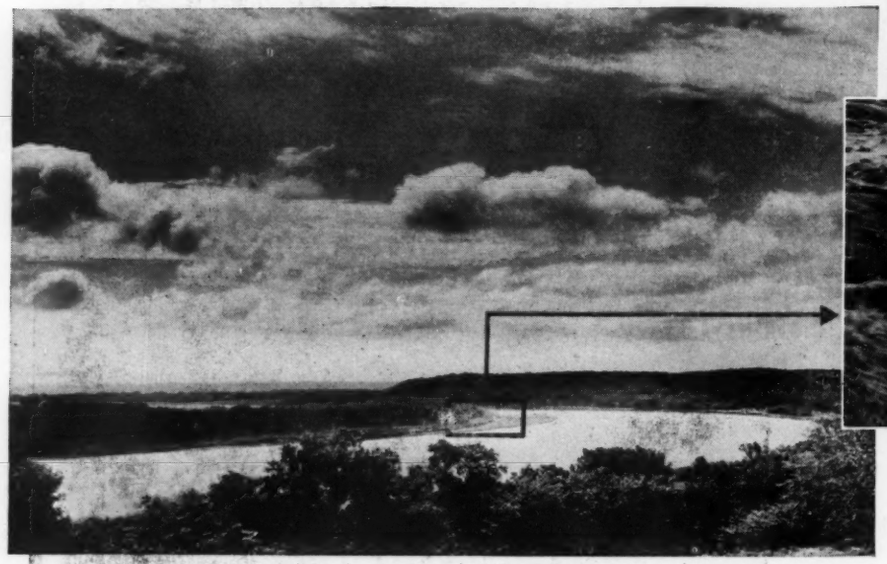
UNDIVIDED RESPONSIBILITY MULTIPLIES THE VALUE of WESTINGHOUSE SERVICE

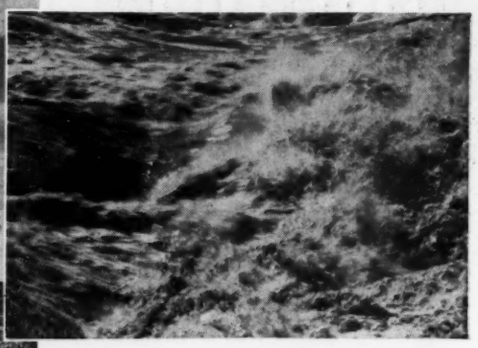
FROM INCOMING LINE TO DRIVEN MACHINE

Specify Westinghouse

One day good water . . . . .

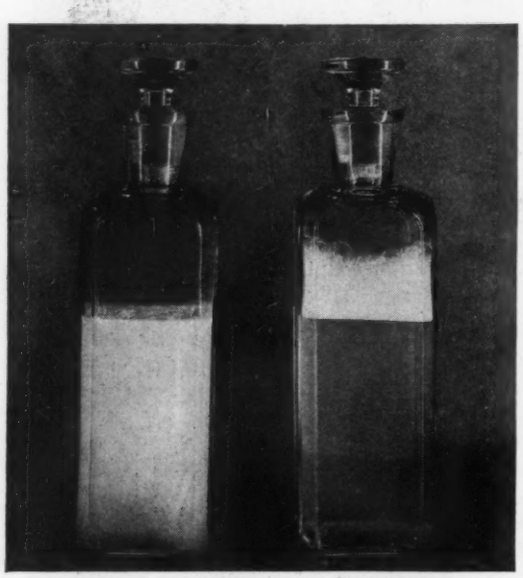
next day bad



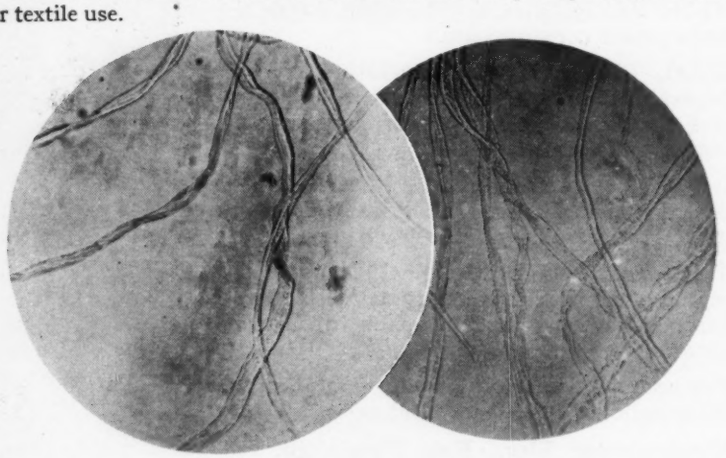


1 Plenty of clean, soft, iron-free water is vitally necessary to textile processing. But Nature isn't worrying about the business needs of textile men. She sends rain, flood, mud . . . regardless.

2 Every time it rains, tons of soluble solids are carried into streams and lakes. The mineral content of untreated water available to most textile mills changes continually. Hardness, turbidity, iron content, varies from day to day . . . complicates textile production problems. Common source of trouble is water hardness.



3 Hard water makes soap curd . . . arch trouble-maker in many textile processes. This picture shows the "soap test" for hardness. In the bottle at the right the water is soft, clean, ideal for textile processing. In the bottle at the left the water is hard, forms milky soap curd, is unfit for textile use.



Permutit Water Conditioning can give you water that is soft—continuously. It can remove turbidity, iron, bad color, harmful chemicals. It gives you water that is *standardized*. Water of uniform characteristics. Water you can depend on. Write for special Permutit publications on textile practice. Free on request. Address The Permutit Company, Dept. BL, 330 West 42nd Street, New York, N. Y.

4 Textile fibre treated with soft, clean water. Such fibre makes a better product at less cost.

5 Fibre treated with hard water. Soap curd is formed, clings to fibre, damages product, adds difficulty and expense to further processing.

Permutit

Water Conditioning

PERMUTIT PRODUCTS FOR TEXTILE INDUSTRY

Zeolites
1. Zeo-Dur 2. Super Zeo-Dur 3. Decalso

Automatic Zeolite Softeners

Filters, Automatic, Multiple, Single Valve; Pressure or Gravity
Siliceous Non-Siliceous
Activated Carbon (color, odor removing)
Iron and Manganese removing
Oil removing

Aerators and Deaerators

Chemical and Coagulant Feeds and Controllers
Displacement Proportionating
Continuous

Boiler Feedwater Conditioning Equipment

Heat recovery systems

New-REEVES Vari-Speed Motodrive

Combines in one compact, self-contained enclosure—ANY standard constant speed motor, a REEVES Speed-varying mechanism, and, where required, speed reduction gears. Embodies features of both the *time-tested,* widely-used REEVES Variable Speed Transmission and REEVES Vari-Speed Motor Pulley.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

The REEVES Vari-Speed Motodrive provides any textile machine with an infinite number of operating speeds, instantly available at the turn of a handwheel and without stopping production.

Through infinite speed adjustability, Motodrive-equipped machines are given new precision and accuracy. Production is faster . . . quality of product improved and uniformly maintained . . . unit costs of processing reduced . . . all by eliminating the waste that results when speeds are too fast or too slow.

The Motodrive is widely used on machines where space is limited or where direct connection is necessary or desirable. In different combinations of sizes, speed ratios and reduction gears, output speeds from 1.35 to 3480 r. p. m. are available.

Among the many engineering features responsible for the high efficiency, long-life and convenience of the Motodrive are:

—Rubber composition endless V-belt built to REEVES' specifications and developed exclusively for this high speed service.

—Positive and effective lubrication through conveniently located force-feed fittings.

—Easy accessibility to internal parts.

—Complete adaptability; may be mounted in most any position—on wall, floor or ceiling, as well as on driven machine.

—Variable speed shaft may be extended on either or both sides of unit.

—Reducer used is of helical gear type—single, double or triple as required.

SUMMARY OF ADVANTAGES

Uses any standard foot-type, ball bearing, constant speed NEMA motor.

Adaptable to mounting in any convenient position.

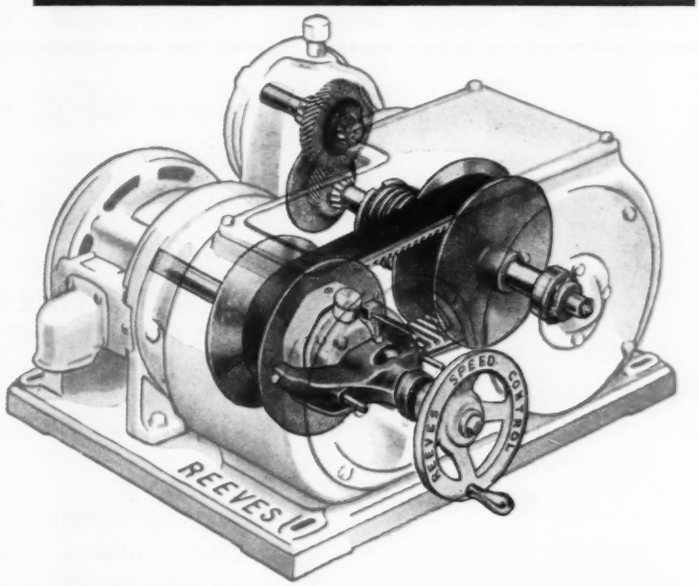
Horizontal and vertical designs—wide range of output speeds—with or without reduction gears.

Time-tested REEVES operating principle.

Operating parts are easily accessible.

Backed by REEVES nation-wide engineering service.

Five sizes, from ¼ h. p. to 10 h. p. Speed variations from 2:1 through 6:1.



AT RIGHT: *Phantom view of* REEVES *horizontal design Motodrive with reduction gears, showing simple, rugged design and construction.*

REEVES SPEED CONTROL

(T-7-37)

REEVES PULLEY COMPANY, Columbus, Indiana

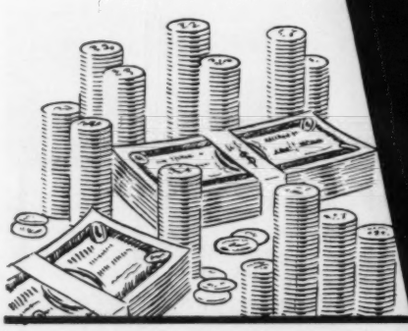
Send, without obligation, complete information on the Reeves Vari-Speed Motodrive as contained in Catalog M-363.

Name .....

Company .....

Address .....

BIG SAVINGS— BETTER RESULTS



in DYEING of *Vat and Sulphur Dyes!*

REDOXYVAT

The use of REDOXYVAT in Vat and Sulphur Dyeing gives these advantages:

PREVENTS PREMATURE OXIDATION

KEEPS DYES IN LEUCO STATE 2 to 3 TIMES LONGER

SAVES ON DYESTUFFS

BETTER COLOR VALUES

NO CROCKING EFFECT

SMALL QUANTITY NEEDED

INCREASES CONCENTRATIONS

REDOXYVAT permits dyeing darker and deeper shades. By preventing oxidation, it eliminates streakiness. It protects the cloth, increasing softness and fullness and yields cleaner, brighter effects.

REDOXYVAT is an unusual product, giving unusual results. Try it. Send us details of your present procedure to get more specific information.

ONYX OIL & CHEMICAL CO.

Specialists on Finishing Materials

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South. Repr. E. W. Klumph, Charlotte, N. C.

New England Off. 100 Fountain St., Providence, R. I.

Midw. Repr. Maher Color & Chemical Co., Inc., Chicago

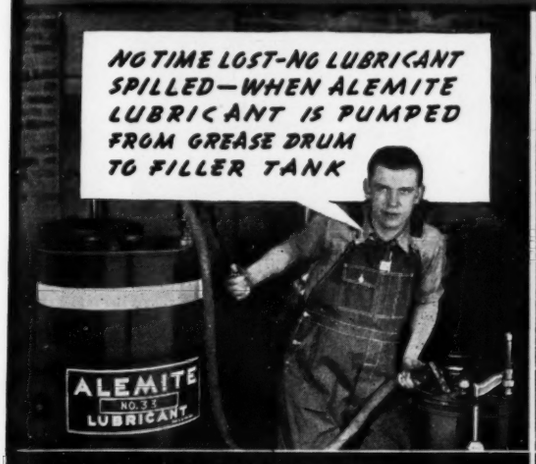
Onyx LABORATORY-CONTROLLED **PROCESSING & FINISHING COMPOUNDS**

Now!

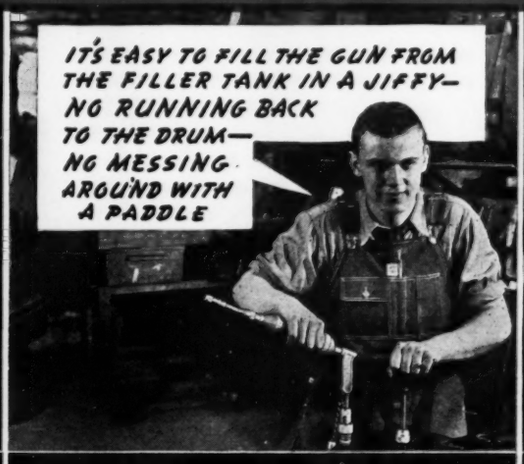
HANDLE LUBRICANT QUICKLY

WITHOUT WASTE-WITHOUT CONTAMINATION

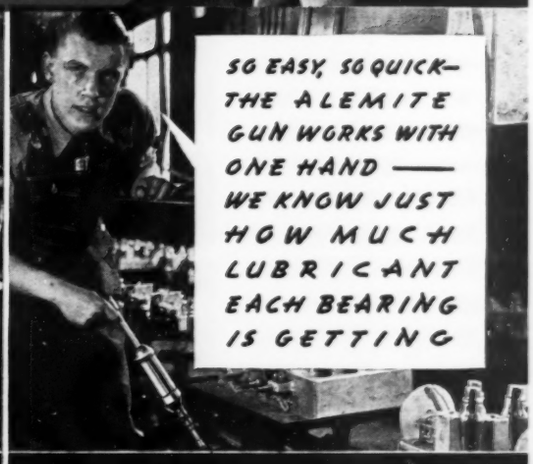
New Alemite Barrel-to-Bearing Method


NO TIME LOST-NO LUBRICANT SPILLED—WHEN ALEMITE LUBRICANT IS PUMPED FROM GREASE DRUM TO FILLER TANK
ALEMITE
NO. 33
LUBRICANT

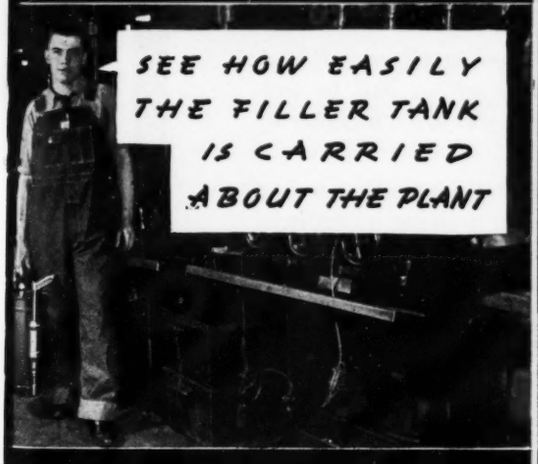
The new Alemite Filler Tank provides an easy method for transporting lubricant from original container to various parts of plant for quick loading of hand guns.



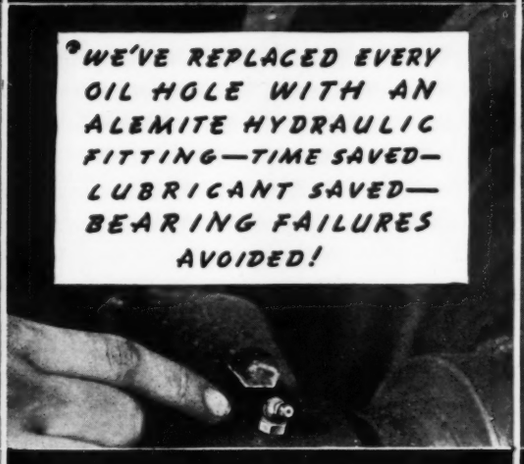
Gun is easily filled by removing plug in handle and placing the opening over the spout of the Filler Tank. Then a few strokes of pump will fill gun.



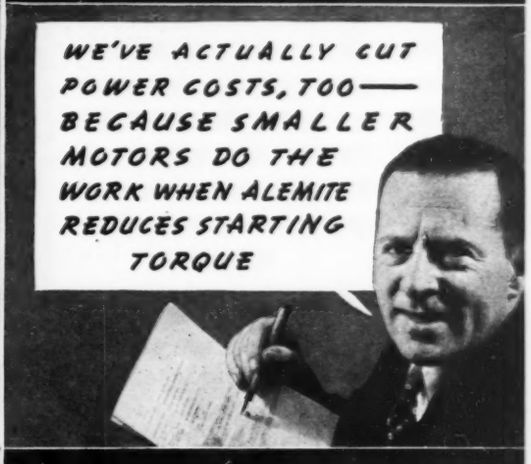
This Alemite Barrel-to-Bearing Method provides for every step in getting lubricant from original container to bearing quickly, without waste or contamination.



New Filler Tank holds 35 lbs. lubricant, fills gun with few strokes. Handle locks for easy carrying. Pump works only when gun is attached for filling.



Alemite Fittings seal oil holes against dust, grit and lint. They eliminate oil-soaked machinery and contamination of products.



In case after case Alemite users tell of lower power costs after adopting Alemite Controlled Lubrication, because it often takes less power to start machines.

Alemite Specialized Industrial Lubricants

No. 6425 Alemite Filler Tank

No. 5586—Alemite Hydraulic Gun

No. 1610 No. 1612 Alemite Hydraulic Fittings

ALEMITE

REG. U. S. PAT. OFF.

WORLD'S LARGEST MANUFACTURERS OF LUBRICATION PRODUCTS

YOU'LL find a world of specific facts in our new FREE manual, "Alemite Controlled Lubrication." Let it tell you about the Alemite System, power or manually operated, which is best suited to your individual requirements. Learn how *you* can cut your operating costs with Alemite! Mail coupon today!

Enjoy Horace Heidt and his Alemite Brigadiers every Monday Evening over Columbia Coast-to-Coast Network. See local papers for time of broadcast.

ALEMITE—*A Division of Stewart-Warner Corporation* Dept. G
1884 Diversey Parkway, Chicago, Illinois

Please send my copy of your new *Free* manual, "Alemite Controlled Lubrication."

*Name*_____

*Address*_____

*City*_____ *State*_____

*Firm Name*_____

"Those stuffed shirts can't bluff us!"

"SOME of these retailers use my trade-mark for bait," he complained. "They advertise my brand, but sell something else.

"I might scare 'em out of it by threatening to sue...but I'll lose a lot of good-will in the trade. What do you National Better Business Bureau fellows suggest?"

We told him that trade-mark work is always delicate and must be handled diplomatically. We said we didn't believe in the "scare" system, but had a method of our own that worked in nine cases out of ten.

"Well—What About It?"

So we got in touch with the offending retailers. At first, their attitude was: "Well...what about it? Those stuffed shirts can't bluff me!"

But as we reasoned with them...showed them that they were hurting themselves by getting people in under false pretenses...they grew more tractable. Said they hadn't looked at it that way before and guessed maybe we might be right.

In the end, they all agreed to quit misusing the other fellow's trade-mark...in their own interests. There wasn't any flare-back, because of the tactful, friendly way in which the thing had been handled. And the manufacturer was delighted.

Many well-known trade-marks are safeguarded by the National Better Business Bureau. And this service is available to any manufacturer.

Your inquiries on other phases of business, advertising and selling will be welcomed, too...whether you are a member of the Bureau or not.

The National Better Business Bureau is a non-profit corporation, deriving its financial support from the voluntary contributions of more than 600 business firms, which believe that business should defend itself against practices that destroy public confidence.

Mail the coupon for the free booklet, "How to Use the National Better Business Bureau."

National Better Business Bureau, Inc.
405 Lexington Avenue, New York City.
Please send me a copy of "How to Use the National Better Business Bureau."

*Name*_____

*Firm Name*_____

*Address*_____

*City*_____ *State*_____

Use Concental

to Soften Cotton Piece Goods

You can cut costs and improve the salability of your cotton piece goods by softening with Concental. It assures brilliant, permanent whites.

Concental is a stable, non-oxidizing product that will not yellow or develop rancidity when subjected to high heats in finishing on friction or schriner calenders and sanforizing ranges. It leaves a fresh, pleasant odor even after long storage under adverse conditions of temperature and humidity.

Concental is decidedly economical to use because of its high concentration. You save on the quantity used and on transportation costs.

For further information about Concental and other Drysalters' textile chemicals, address . . . .

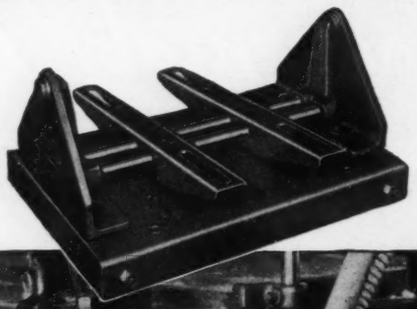
HERCULES POWDER COMPANY

Incorporated

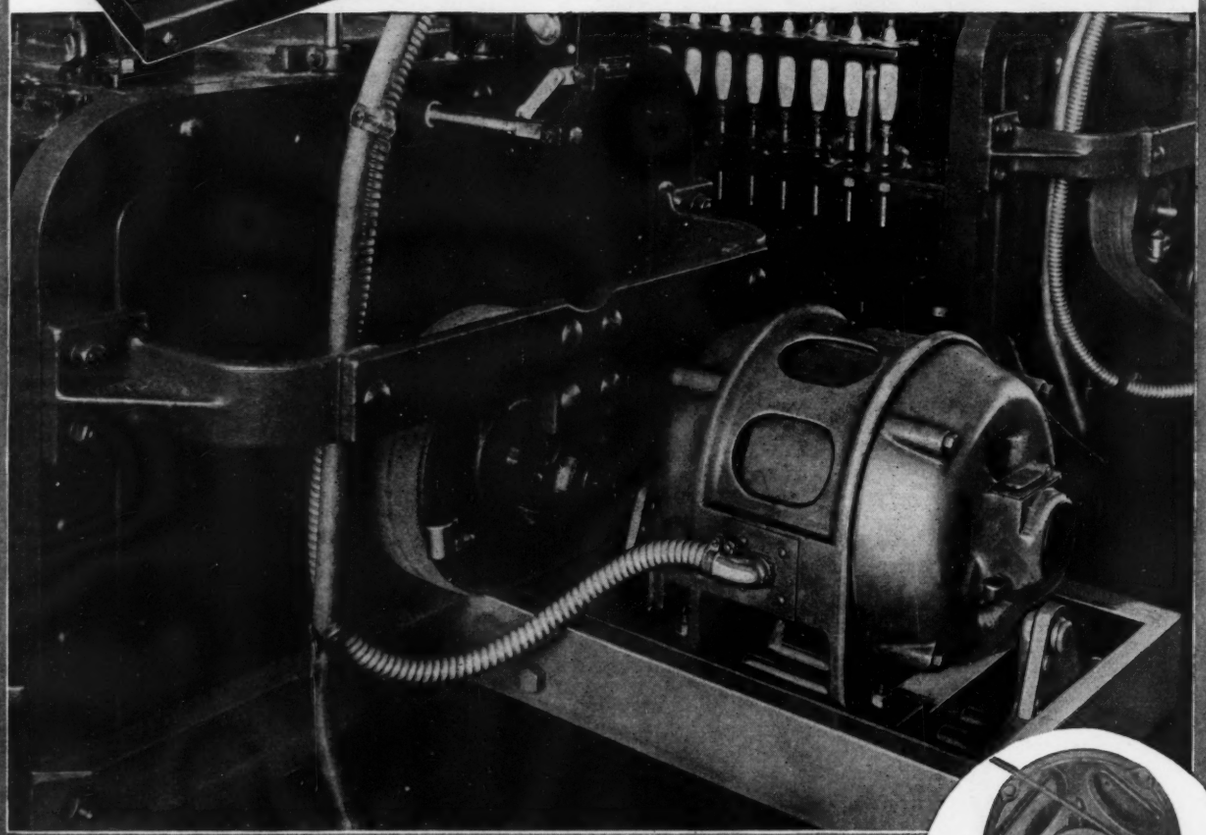
PROVIDENCE DRYSALTERS DIVISION

PMT-11

Hospital Trust Building, PROVIDENCE, RHODE ISLAND



Belt Tension Control is decidedly NEWS!



MILL men who are paying more attention to belt tension are *paying less for replacements.* It's all a matter of *control.* You're accustomed to careful regulation of atmospheric conditions, chemical formulas, yarn weights, uniformity of weaves and textures, etc. Then why not "spin" extra profits from every motor in your plant by means of automatic BELT TENSION CONTROL?

Amazing how this American Tension Control Motor Base lengthens the life of belts and bearings . . . lengthens the intervals between replacement shutdowns . . . lessens your dollars in power bills. This base automatically *matches belt tension to load* so that it *never exceeds* the amount necessary to transmit the required horse-power efficiently.

No other type of short center drive can duplicate its performance and economies. Ask us for a detailed report on significant, scientific tests conducted by impartial research authorities operating your type of machinery. The facts and figures will amaze you.

THE AMERICAN PULLEY COMPANY
4200 WISSAHICKON AVENUE
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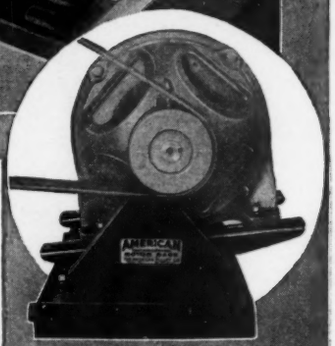
AMERICAN
Tension Control
MOTOR BASE



The American Tension Control Motor Base actually harnesses a latent power inherent in all motors. This is known as "reaction torque." It is a natural physical law which science has recognized but never before utilized to effect substantial economies in plant operation.

COTTON

Vol. 101 No. 7

JULY, 1937

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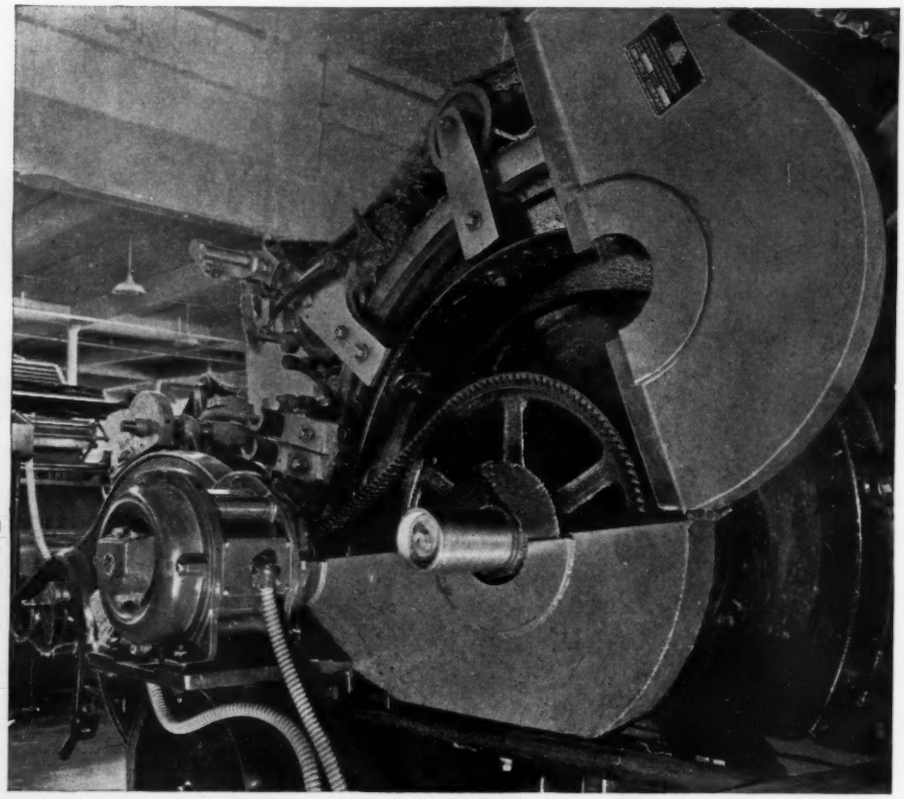

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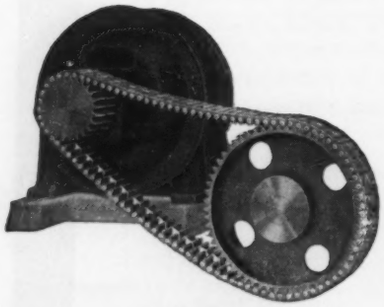

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7029-B

Vol. 101
No. 7

COTTON

July,
1937

Methods of Fixing Looms

(Article 1)

By B. H. Hawkins

LOOM FIXING methods vary in the different parts of the country; they vary from mill to mill, and even from section to section within the same plant. Few mill men agree on all the points of setting even one motion of the loom. But a compilation of ideas analyzed, with the best one selected to suit your conditions, is a valuable adjunct to the running of a weave room. The author of this series, of which this article is the first, is not offering it as a cut-and-dried law for loom fixing, but as the opinions of many, supplemented by his selection of what he believes to be the most suitable method . .

FROM OBSERVATION and inquiry I have found that different mills in different localities have a certain way peculiar to that locality to set up parts of the loom. Probably I should not say a certain setting, for I think certain adjustments of the settings would more nearly fill the bill. For in the end, these settings are practically the same. I don't want the usage of the phrase "settings of the certain parts" to be confused with any part of weave room management, as one mill may make settings or have certain rules governing the settings on their looms and obtain good results in the way of quality, production and low cost, while some other mill in a different section of the country may have its pet or particular settings and still obtain results equally as good as those of the other mill. Therefore in these articles I want to give the different adjustments of the settings that I have run across and my reasons for the ones I think are best.

Fixer testing picker for parallel

These articles are written from experience on automatic bobbin changing looms and are written with this kind of loom in mind, but there are many principles involved that may apply to any type of loom. This series is not to be taken as an expression of the cut-and-dried laws of loom fixing, but is written as an expression of opinion of the author, supplemented from time to time by the opinions of other men, but in each instance explanation is given where this is true. The author expects the reader to disagree with him many times—for the methods of fixing looms are as many as the wives of the sultan.

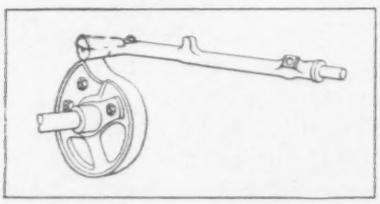
As it has been handed down for generations and is now taught in textile schools, the three basic or principle motions of the loom are picking, shedding and beating-up. So suppose we start with the motions in that order and see what can be brought to light about each of them.

The picking motion is, to my way of thinking, the most costly motion on the loom, because it is the motion that requires the power. Costly not only for that motion, but by its effects on the rest of the loom as a whole. What mills pay in the way of repairs and upkeep by having too much power on the pick would go a long way toward declaring a dividend on its common stock. Since these results are true in regard to the picking motion, it seems to me that superintendents and overseers would give this motion and its settings particular attention and *get that power strap up.*

There seems to be two or three different methods of setting the picking motion. As a whole the setting

of the cams doesn't vary theoretically but setting the lugs and getting the desired stroke on the picker stick does vary. Let me say at this point that the later model looms have gauges that are used in determining when these settings are correct. This, I think, is a good thing if overseers enforce the rule that a loom has to be set the required way—to the gauge—then all looms in a particular mill will be set as alike as is humanly possible to set them. This will insure the looms being in a state of good repair all the time.

The first method I encountered in my search for the truth in this matter, the loom fixer set the crankshaft of the loom on top center and set the pick cam up so that the pick ball was resting in the hollow of the cam or pick point in such a manner that the ball started rising as the crankshaft left top center. The loom was then turned over until the highest point on the pick was reached, and the lugs set with play in them that equaled the thickness of a certain one of his



fingers. It seemed that each individual fixer had a different finger that he used as a gauge for this setting. When I asked them if the loom always picked on top center, using this method of setting, they said it would nine times out of ten. With the pick ball still on the highest part of the cam they measured the stroke of the picker stick. The stroke required varies in different mills. Some mills never even check it at all. I've met fixers, who have been fixing six or seven years, that didn't know what I was talking about when I asked them how they tested for stroke. I am not saying that looms won't run without the fixer setting for stroke; if his cam rim, pick point, pick ball and pick lever are in good condition and set up properly, he will in all probability get the stroke, but on looms where these conditions aren't true the loom can be made to run—with more power. The stroke usually required is from 7½ to 8 inches. As I have said before though, some mills vary in the inches of stroke required, but I think a 7½- or 8-inch stroke is about right for Model E 40-inch loom.

Back to the thumb rule fixers; if his stroke didn't measure right with these settings, he looked over his picking motion to find any worn parts that might be preventing him from getting the desired stroke, replaced these parts and tried again. Other fixers set their lugs with the loom on front center, leaving a little play in the lug. How much is a little? Not the thickness of a finger but still just a little. By these methods the fixer is never positive that his shuttle will start moving out of the box when the crank-shaft starts leaving top center. After years of experience he may be able to have his nine out of ten looms picking correctly on the first try, but think of the time he has wasted for himself and the loss to the company in various ways that went on over a period of years while the fixer was learning which finger to use and the amount of a "little play", and still never knowing positively that he will be right and the loom will start picking from top center.

It's a little thing to raise such a howl about, you say; an overseer once told me, "any fool can replace a crankshaft, but it takes a man who is using his brain to fix the little things on a loom—then he can be called a loom fixer."

Picking Cam

The picking cams are now being made in three parts, the cam hub, the cam rim and the pick point. The hub is made in two parts and is known as the split cam hub, bolts being used to fasten it to the cam shaft. This new type hub can be replaced easily, thus reducing the time the loom is stopped for this particular repair job. Formerly, when the hub was made in one piece, the cam shaft had to be slipped out for the hub to be replaced, which job required quite some time to perform. The cam rim and pick point are also made separately because it is more convenient and less expensive to replace the point as it wears rather than the whole picking cam. The point usually wears before the cam rim and has to be replaced first. The cam hub is made to fit against the loomside. This point should be noticed, for should the hub not be set correctly the pick ball will not ride the entire width of the point and rim thus killing the power and causing the loom to slam off.

While the crank shaft is revolving twice the cam shaft is revolving once. Thus it is readily seen that one pick cam will operate on one pick and the other cam will operate on the next pick, as the cam shaft revolves only once every two picks. Some fixers set up their looms so that if the right-hand shedding cam is pressing the harness down then the loom will be picking from the right-hand side. Personally, I can't see that it makes any difference which cam is depressing the harness when the loom picks, if these two motions are timed and set up correctly.

Loom Picks on Top Center

If the pick cam is set up so that the pick ball starts rising as the loom reaches top center, and the lugs are set up tightly against the picker stick while the loom is still on top center—the shuttle will move and there is no guess work connected with it. Turn the loom crankshaft one revolution until it reaches top center again and set the other cam in a similar manner. The pick cams and lugs are set up independently of each other with the loom on top center and if it doesn't get the stroke then some of the worn parts need replacing for it will be picking correctly from top center.

There are two ways that power may be added or taken off the loom. One is by raising or lowering the power strap on the picker stick, and the other by raising or lowering the pick arm in the slot that is in the pick shaft. If a change has been made at either of these two places the stroke on the picker stick should be checked and the lugs reset if necessary. Care should also be exercised when making a change at either of these places to see that the long lug, lug block and short lug work approximately on a straight line and not at an angle.

Loom Speed

The speed at which looms are run is important. If the speed is too high it may cause excess stoppage, etc. This is a matter that each mill usually has to work out for its particular conditions; it must determine at what speed the looms should be run to obtain the best results in the way of production, etc. Speed will vary according to construction and weight of different goods. Wide looms run much slower than narrow looms. This does not mean that the shuttle travels slower, as shuttles in wide looms usually travel more feet per second than do shuttles in narrow looms, for the shuttle spends most of the time in the box on a narrow loom. The different loom manufacturers usually recommend speeds at which their looms should be run in order to obtain the best results from them. Excess speed may cause more broken ends and broken shuttles, puts more strain on all parts, causes the loom to wear out faster, and in the end lowers the production.

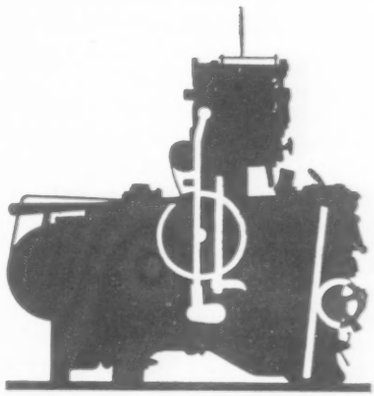
Pick Lever

A very important point in connection with the picking motion is the setting of the pick lever. These levers control to a large extent the life of a great many parts of the loom, as well as the performance of these parts during the same period of time. You have noticed, I am sure, one certain place on the cam rim that seems to wear faster than the rest of the rim. I want to state before I start an argument, that a pick point set incorrectly will cause the cam rim to wear out in exactly the same manner. Suppose for instance, the shoulder of the stop on the pick lever has been cut or filed off. This stop, as we all know, acts as a bumper for the pick lever and works against the loom side; when the loom is running the pick point throws the ball upward with great force, and if this stop were not provided, the pick cap might be broken against the loom side. To start again, suppose this shoulder has been cut off, thus when the loom picks the pick ball and cap can rise say ½-inch, above the cam rim. By the time the pick ball falls or is pulled back down this ½-inch, with the loom running, the picking cam has been turned over to where the ball strikes the rim just behind the pick point each time the loom picks. As you probably noticed, they don't have to run in this condition long until it is necessary to replace the rim. Also if the pick point is set with the heel of the point sticking up, so that it doesn't form a smooth connection when bolted to the cam rim, this same action will take place.

To make this a little bit clearer, suppose you went down a sliding board feet first a number of times landing in the same place each time. After a short while there would be a hole in the ground where your feet struck as you landed. The same is true of the worn place in the cam rim. It is caused by the action of the pick ball striking the cam in the same place on an average of 50, 75 or 100 times a minute depending on the speed of the loom. This will also cause the picker stick not to be returned to the back of the shuttle box with a smooth even motion. Instead it will wobble and appear to hesitate much in the same manner as does a gentleman, who on occasion imbibes too frequently.

The heel spring being too tight will cause the cam rim, pick lever, etc., to wear excessively as well as to require more power, causing a harsher pick and it may cause the loom to slam off. I think only enough spring to cause the picker stick to be returned promptly to the back of its stroke after each pick of the loom is required.

I don't believe in packing behind pick lever bearings in order to line the shaft properly, as they will continually give trouble if lined up in this manner. Occasionally a fixer will find a pick lever on which the pick ball stud is too short or too long, or there may be something else wrong with it. In which case he



can't be expected to set the lever properly; he should return it to the supply room.

Setting the Pick Lever

As each loom wears differently and a different amount, no two pick levers can be set exactly alike on looms that have been running for some time, but each new pick lever should be set to conform with the particular loom on which it is being placed. Before replacing a worn lever the fixer should inspect the cam shaft and bearing to see if either is badly worn as the clearance between the stop on the pick lever and the loom side will depend upon the amount of wear of either or both of these parts. Also, he should check the cam rim, pick point, and pick ball—all of which are determining factors concerning the clearance setting. Bolt the shaft to the loomside and put on the pick ball and cap. Turn the loom over until the pick ball rests in the hollow of the pick point. The ball should rest so that it presents a flat surface to the point for the entire width of the point. This determines the distance to the front or back, top or bottom that the bearing should be set. (The slot for the bearing in the loom side allows about ½-inch or ¼-inch in moving distance from front to back and about the same distance from top to bottom.) In this manner the pick ball utilizes the entire surface, width-wise, of the pick point. It will allow the point to wear evenly without undue wear on the heel or toe of the point, and also allow the pick ball to follow the cam rim evenly all the way around. Then turn the loom over until the pick ball is at the highest point of the throw. The clearance here be-

tween the stop and the loom side should, I think, be about 1/16- to 1/8-inch. This setting is not too close to hold the pick ball against the rim too tightly, or too wide to let it bounce around and cause undue wear either way. To get this clearance the shoulder on the stop has to be properly filed or cut away if it needs. The same is true concerning the pick lever bearings so that the shaft will not bind. I have had to take a pick lever out as many as three times to file it before it fit to my satisfaction. I believe it is better to file off a small amount each time than to file off too much and then be forced to pack under the bearings.

Parallel Motion

The parallel motion is a very important part of the picking motion and the two should be considered in conjunction with each other.

The object of the parallel motion is to insure the picker's being parallel throughout the entire length of its stroke. If there were no parallel motion on the loom, the path of the picker would be in the form of an arc, but with this motion the path of the picker should, theoretically, be a straight line from the back of the box to the front of the box, thus insuring an even or straight throw of the shuttle from one box to the other.

Looms that are running with unparallel pickers have a harsher pick, require more power, put more strain on all parts, cause more broken ends and broken shuttles and the loom to slam off.

The parallel blocks are important in getting and keeping the pickers parallel. These blocks have a tendency to wear on the back side, which allows the picker stick to sit at an angle causing the picker to be angled towards the front of the loom. When parallel blocks become worn they should be replaced. In addition to replacing the blocks at the same time pickers are being replaced, the blocks should be inspected periodically and new ones inserted when needed. Worn blocks will cause pickers to be worn one sided and will greatly shorten the life of the pickers. Therefore as the blocks are easy to install and cost much less than pickers, replacing of these blocks will be a good investment.

A worn picker foot or shoe will also prevent the picker from being parallel. To test and ascertain if the picker foot or shoe is worn enough to be replaced, the shuttle is pushed to the end of the box and slowly pulled forward with the picker following the shuttle; if the picker is parallel all the way from the back to the front of the stroke, or throw of the stick, then the foot and shoe are in good enough condition to continue running. If the picker foot is out of parallel 1¼ to 1½ inches from the back or front of the throw, then the foot or shoe is worn enough to be replaced. Oftentimes it is hard to parallel a picker perfectly, as loom parts such as these, the foot and shoe, are usually cast instead of milled. Thus it is almost impossible to have the throw of the picker on an absolutely straight line, as it will have a tendency to rise slightly in the center of the stroke. This condition cannot be overcome when using parts that have been cast and not properly finished.

The amount of spring on the heel strap should only be enough to bring the picker stick and picker to the back of the box after a pick has been inserted. Any spring over this amount is just so much added force to be overcome by the loom—requiring just that much more power to insert a pick.

A bad picker may be the result of the way the picker was driven on the stick when it was new. Some fixers pound them with abandon with the result they are battered and knocked out of shape. Pickers should be driven on from the back with the aid of some flat surface against the picker. A 34 wrench will fit around the picker stick and will present a flat surface to the picker. It will do the trick nicely. Pickers driven on from the back in this manner have no tendency to ride up the stick because the picker has not been stretched. On the other hand when one is driven on from the front the leather is forced down and the picker will ride up the stick the amount it was stretched when the loom has run a short time. This will throw the picker off parallel in the front.

Set Picker to Shuttle

One thing that should be impressed on all loom fixers from the time they are learning until they stop fixing is that the picker should be set to the shuttle and not the shuttle to the picker. The shuttle should be boxed and centered properly first and then the picker set to it. If the shuttle is set to the picker, the shuttle is likely to be off center and the pickers will certainly wear faster than they can be replaced. Occasionally a picker stick will be crooked and the fixer should check this before he installs it because it is almost impossible to parallel a picker when the stick is not straight.

After the picker has been driven on the stick it should be paralleled by use of the parallel screw. This screw has a jam nut on it which it is advisable to use in order to hold the screw in the desired position and keep the picker parallel. Be sure that the bumper is in good condition and is not letting the picker stick come too far forward so that the parallel shoe cannot take care of the radius of the picker stick. Be sure that the picker is not riding or dragging on the end lay plate at either the front or back of the stroke. The advisability of using one or two screws to hold the picker in place is a matter of choice, depending on the kind or grade of picker being used. The picker we are using at present is easily held in place with one screw in the side of the picker. Regardless of whether one or two screws are being used, be positive that the screws are run so that the screw head is flush with the leather of the pickers. There's no need to even mention how well the filling likes to catch and hang on exposed picker screws, so we won't go into that.

Good results may be achieved by proper paralleling of pickers. In the long run it will mean less work for the fixer, a better running job, a lower supply bill, more production, and less seconds.

(The next installment, which will discuss the proper setting of the harness, the beating-up motion, and face or cover on the cloth, will appear in an early issue.—The Editors.)

Contraction Graphs

By Gilbert R. Merrill

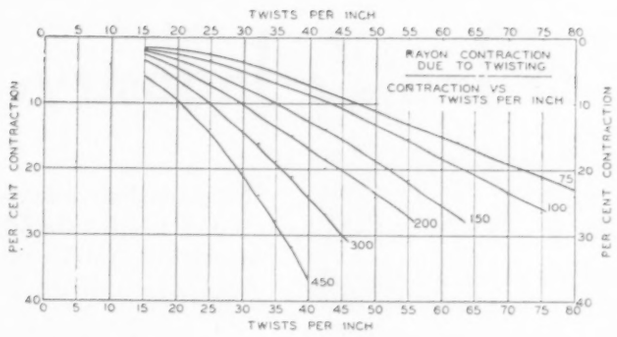
IN A STUDY of the contraction of rayon yarns in twisting under the title, "Rayon Crepe Yardage Tables", the Liberty Throwing Co., Inc., of New York City has provided some very useful data. The booklet, in which the data is published, has a tabulation for the contractions of 75, 100, 150, 200, 300 and 450 denier yarns. In these tests, the twists range from 15 to 80 turns to the inch for the finer deniers, and, gradually changing, to a range of from 15 to 40 turns per inch in the coarser deniers. Contractions vary from 1.5 per cent to 36.5 per cent.

The data from the tables have been plotted in Fig. 1, showing the contraction vertically and the twists per inch horizontally. It will be seen that each denier has its own curve but that these curves all have the same general trend. With any given twist, the coarser yarns contract more than the finer ones.

In the January, 1936, issue of COTTON, a plot of the twist contraction in single cotton yarns was given. In this plot, the contraction was plotted against the twist multiplier rather than the twist per inch. In attempting to correlate cotton yarn contraction with these rayon figures, an effort was made to get the two sets of data on a comparable basis. This was done by converting the denier to the equivalent cotton count and then determining the twist multiplier for each of the given twist-per-inch figures represented. Then, the contractions were plotted against these twist multipliers.

The resulting figures are shown in Fig. 2. The points on this chart are indicated by different symbols for each denier. A study of these points shows that they are all located within such a narrow band that it is practical to consider that the one line shown represents all the points for every denier.

Finally, the curve for cotton yarn contraction was plotted as a dotted line on the same chart as the rayon yarn twist contraction curve. It is quite surprising how closely these two curves follow each other, especially when one considers that one is for yarn spun from short staple wavy fibers, while the other is for a strand of continuous, straight fibers. While these curves do not exactly agree, it can be seen that at the maximum divergence, they come within 1.5 per cent of each other, while at most places they are closer together.



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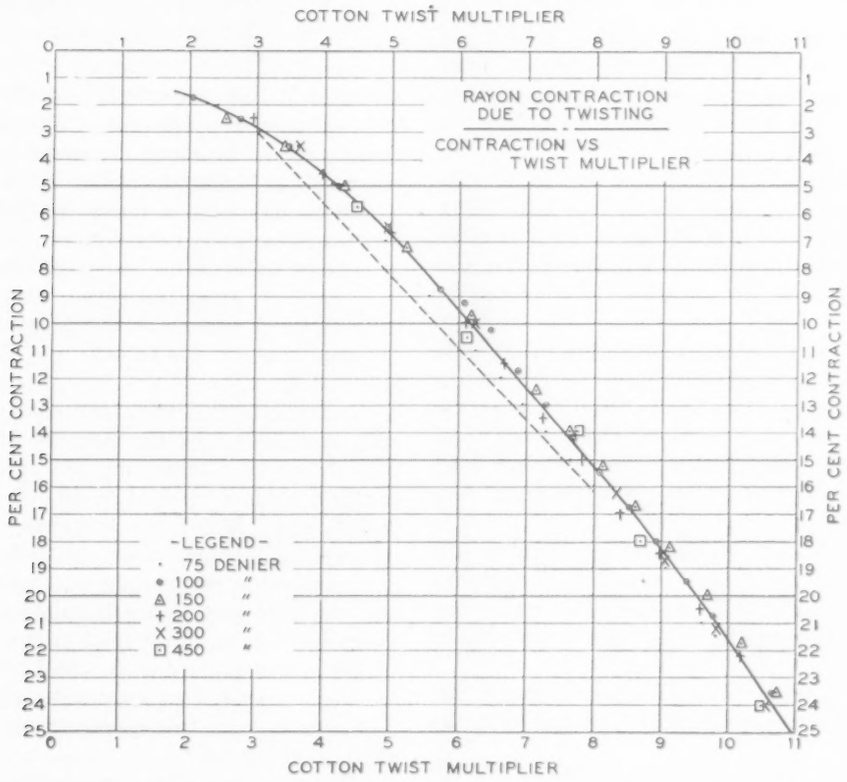

Views in a mill of India. Note the dress of the native operatives. The spinning is 4-roller high drafting. The motors are variable speed . . .

Cotton Textiles Economic Mainstay of India's Industry

THIS insight into the cultivation of cotton and the textile mills in India will be of interest to American textile manufacturers. At any rate, it will be a refreshing diversion after thinking about the labor situation over here so much, and it will give some pertinent facts concerning the equipment in and practice of the mills in India . . . . .

THE CULTIVATION of cotton, and the manufacturing industry constitute one of the economic mainstays of India, with its population of approximately 365,000,000.

The number of people engaged in the growing of cotton must be very large, as it is estimated that the average yield is over 6,000,000 bales per year, of which probably over one-third is of a minimum staple length of 7/8-inch.

The completion of the Lloyd Barrage Scheme in Sind, which is one of the largest irrigation schemes in the world, has opened up extensive tracts of land for cotton growing, but it will be some time before the full area is under cultivation.

Increased cultivation of Cambodia and other cottons grown in the Coimbatore District is also being undertaken to feed the increased number of new mills erected in that district during the last few years, and to meet the general demand for these popular classes of cotton.

In connection with cotton cultivation, the wide activities of the Indian Central Cotton Committee are deserving of full praise, covering as they do scientific methods of improving and extending the crops, and a keen surveillance with a view to restricting seed mixing and other evils in ginning and pressing factories.

The present opinion in India is that the roller gin is the most suitable for Indian cotton, and this machine is almost universal. A number of saw gins are installed in certain districts, but roller gins remain the most popular.

A gratifying feature to the cotton growers has been the increased interest taken by Lancashire in the spinning of Indian cottons; and exports to Lancashire have increased considerably during the last two or three years. Japan is, however, easily to the forefront as the largest buyer of Indian cotton.

There has been a trend in India during the last few years towards finer counts, and this has resulted in a large increase of imported cottons. Formerly a good deal of American cotton was imported, but the most favored cottons at the present time are Uganda for counts about 40s to 60s; and Egyptian for counts up to about 120s.

Turning to the manufacturing industry, the latest statement issued by the Bombay Millowners' Association shows that there are 365 mills equipped in this country, with a total of 9,686,000 spindles (ring and mule), and 198,867 power looms. The total number of spindles includes about 600,000 mule spindles, but a considerable percentage of these are not working, and the only new mules installed during the last few years have been for 'bump' yarns. The consumption of the above mills during the 12 months ending 31st of August, 1935, was approximately 3,123,414 bales of 392 pounds each, this consumption being based on day shift working only.

From information compiled by the Bombay Mill-

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owners' Association, it is interesting to note that in 1880 there were 56 mills only, with a total of 1,461,590 spindles and 13,502 power looms, consuming a total of 307,631 bales of 392 pounds during the year.

When it is considered that the industry at present gives employment to about 415,000 operatives on day-shift alone, and has a total capital of nearly 30,000,000 pounds, its importance in the life of this country can well be realized.

Hand Spinning and Small Power Installations

There is also an enormous number of hand spinning machines distributed over the country, and it has been estimated that there must be nearly two million hand looms of all types, which are used to a large extent by the agricultural classes when they are not engaged in their usual occupation between the seasons.

There are also large numbers of small power loom installations with about 6 to 24 looms run by electric power where this is available, or by a small oil engine in the out-of-the-way villages.

In some districts where there are large numbers of hand looms and small power loom installations, schemes are on foot to provide small modern installations of machinery to serve as centers for the preparation and supply of sized beams to the weavers, in order to obviate the very crude method of beaming and sizing usually adopted.

The mill industry is well distributed over the country, with the main centers in Bombay Island and Ahmedabad. Bombay Island leads with over 3,000,000 spindles and 76,000 looms in 73 mills; and Ahmedabad follows with approximately 2,000,000 spindles and 47,000 looms in 83 mills. Then come the other centers such as Cawnpore, Calcutta, Sholapur, Delhi, Indore, Coimbatore, etc.

Bombay and Ahmedabad now appear to have reached saturation point as regards their present numbers of mills, and there is a definite tendency for new mills to be erected adjacent to the cotton producing districts, and within easy reach of consumers. Not only do they save transport costs, but they also have an advantage in labor costs; and the initial benefits of cheaper land, buildings, etc.

Development of Textile Centers

The chief centers of development at the present time are the Coimbatore district, where the number of mills has increased within the last six or eight years from about 5 to 25, and Bengal district, which has hitherto been very backward in attempting to cater for its own large consumption of yarn and cloth.

An electric grid in the Coimbatore district, made possible by the completion of the Pykara Hydro-Electric Scheme, has been a large contributory factor in the notable development of this district as a new mill center. Added to the benefits of the grid, the mills are in the middle of one of the best cotton growing tracts in the country; and there is also a tremendous demand for yarn in the south for hand loom weaving. The new mills erected in this district are mostly of an average size of two preparations, with a total of about 12,000 spindles. In certain cases, mills have commenced with one preparation of 6,000 spindles only, extending at a later date to 12,000 spindles or more.

The average counts being spun in this district are 20s to 40s, and only two or three of the new mills have installed weaving machinery.

Modern Equipment in Old and New Plants

It is of interest to note that machinery installed is as up-to-date as possible, and is typical of the modern plant being installed at the present time by the average Indian buyer.

Single process blow room is installed with pneumatic mixing arrangements, 'Shirley' cages, etc., and all blow room machines are driven by individual electric motors. The cards are usually driven by line-shaft, but the draw and speed frames and ring frames are driven by individual motors. The ring frames are fitted with the four-roller system of high drafting, and tape driving; and the type of driving adopted is chiefly by a variable speed motor directly coupled to the tin roller shaft, to give a spindle speed up to 11,500 r.p.m.

In addition to the new mills, the older mills are also fully alive to the importance of keeping their plant up-to-date in order to meet foreign competition, and to fit their mills for the production of finer counts, and finer and better finished cloth.

Conversion to single-process electro pneumatic blow room, and four-roller system and tape driving, is one line of activity; and the other lines cover the installations of combing plants, Jacquard weaving, and the most modern bleaching, finishing, dyeing, mercerizing and printing machinery.

A good deal of development has also been made in the weaving of artificial silk fabrics from imported yarn, but so far there have been no serious steps taken towards the installation of an artificial silk spinning plant, although certain schemes have been under consideration from time to time.

Day and Night Shift. Manufacturing Details

A number of mills are also experimenting with the spinning of staple fiber, and it would appear that this is a side of the industry which will be extended in the near future, particularly if the agitation is successful for a reduction of the present heavy handicap of an import duty of 3 annas per pound on staple fiber.

During the last few years there has been a marked tendency to depart from the old standards of 20/30s counts, and at the present time a large number of mills are concentrating on 30/40s and 40/60s, while a number of mills are producing up to 100/120s.

This tendency towards finer counts is the result of severe internal competition between Indian mills on the lower counts, and this tendency will no doubt be maintained.

Efforts have been made, particularly during the last year or two, to reduce the overhead costs by introducing day and night shifts, and at the beginning of this year there were over 30 mills in Bombay and 30 in Ahmedabad on night shift. This number has now been reduced considerably, due to over production and the consequent large stocks, coupled with a falling off in demand.

The Spare Floor Philosophor

Part 1

Introducing John Simpson

EMANATING from the pen of a practical southern mill man come the experiences of the "spare floor philosopher". Every mill has one or more—and profitably. Spare floor philosophers are, however, much in the same category with "bull sessions", they may be either beneficial or detrimental. We believe our "John Simpson" is the former type, so in the authors' inimitable manner we pass him along to you.—The Editors . . . .

I WAS TALKING to the old spare floor philosopher, John Simpson, the other day, and the more I talk with that fellow the more I become convinced that educated people are not always the most sensible. John knows how to read and write and knows how to do simple figuring, and he has read the community library almost empty. Though he is not an educated person himself he is, at least, a firm believer in education and to prove it he is making a sacrifice to keep his children in high school. And boy, is he proud of those children in high school. But that's not what John is most proud of. John is proudest of his job. He says that he is going to run his job so good that the only way he will ever lose it is when he himself gets a promotion. Of course John is just a little bit bad about bragging, but nevertheless, when you pin down on him he can always put his finger on what he is talking about. For instance, he was telling me how he was managing to cut the corners off his supply bill. Naturally, I kidded him about this like Abner does Lum. I told him that was easy. Just clip 'em off with the scissors. But John just frowned a little and kept rattling it off like this:

"He took away a great corner . . ."

"I ain't the best section man I reckon, but let me tell you every thing I learn that's any good I put it in practice. For instance, I am getting about three times as much wear out of my spooler motor belts since I learned just two things: not to get them too tight; to keep them clean, that is, by holding some clean hard waste to 'em while they're running. I do that every day. It keeps the oil off them, which causes them to rot, and it keeps 'em free of lint, which makes 'em slip. If you tighten a rubber belt too tight it'll break or stretch the fabric and that'll make it run to one side where it'll rub ag'inst sump'n and tear up."

"That sounds pretty good," I told him, "but what about the other corners?"

"Just be patient," he said, "I'm coming to that . . . still on the subject of belts, too—elevator belts. I get long rivets and some scrap leather and make cleats of it and then nail them on my old warper belts. These make mighty good elevator belts. Shucks! I've got some that's been running nearly four years. I reckon they're just as good as any for they ain't give me a bit of trouble.

"I've found that I get a lot better service out of my throw-out-hook belts if I make them about an inch and a half or two inches too short when I cement them together. They're easy to put on if you'll tie about 3 mill bands around them and then put the bands around the pulley and get on the opposite side of the spooler and pull 'em on. Gosh! I used to work for 10 or 15 minutes and nearly break my fingers to boot trying to get a throw-out-hook belt on, and then I wouldn't have it tight enough to last any length of time. I just happened to think of the mill bands one day when I got a throw-out-hook belt too short. I put it on with the bands and when it slipped over the shoulders of the pulley in place it twanged like a banjo string. That belt ain't give me a minute's trouble since, and that's been two years ago."

"That sounds all right," I said, yawning, and then giving myself a good stretch I asked him if he couldn't talk about something besides belts. "Let's get on one of the other corners," I suggested.

"I think this will interest you," he went on. "Do you know what makes most automatic machines automatic?"

"I don't know," I said, and asked him "What does make an automatic machine automatic?"

"Springs," he said. "A cam pushes a lever and a spring pulls it back.

"Just think, to each spooler and warper and the accessories that go with them there are over twelve thousand springs. Of course not all of 'em are ordinary springs, but they're springs nevertheless.

"To each unit of the spooler there are eight springs, and in each cheese core there are eight more, and the traveler has springs all over it, and so does the warper. Why, if a feller would take all the springs off a warper it'd be about half gone."

I said, "That's a lot of springs. But what's that

Pointers On Cutting The Costs Of Spooler Room Supplies . . .

got to do with the supply bill?"

He didn't answer immediately but in the meantime reached into his pocket for the old reliable Ram's Horn and took away a great corner with just one bite. He chewed on the tobacco for a little bit to get his thinking machine to operating, and then, holding his lower lip way up toward his nose to keep amber from spilling on his bosom he caught hold of my arm and said, "Come over here to the spooler." I followed.

"Now these detector springs have a tendency to become uncoiled and this causes this straight part to become bowed. When you straighten out the bow you'll find that the straight part is too long. So instead of throwing it away just clip it off the right length and it's as good as new. I don't know whether you understand what I am talking about or not but anybody that's monkeyed around a spooler will know what it's all about. And anybody knows that throwing them away is just like throwing the company's money away, whether they've had experience with a spooler or not.

"Now here's another spring that can be worked over in most instances—the pocket spring. It has a hook on each end that is screwed into the spring. These hooks very often break off, but they always break near the end, and the straight part of the hook is long enough to be bent to form another hook. I was in a certain mill a few days ago—in the spooler room—and the supply cupboard was open and inside of it I could see about twenty-five of these springs, all of them with the hooks broken off. I asked the section man what he was going to do with them and he told me he was going to throw them away. I showed him how I fixed 'em and he was surprised."

"Well, old man," I said, "I got to go. We'll get on some of the other corners next time I come through."

"I just got started," he said. "When you cut 4 big corners off a supply bill you'll find that you've got eight little ones left. It doubles every time. It's just like your ideas, when you use one you'll have two more."

(Another installment of this discussion will be presented in an early issue.—The Editors.)

Change of Hours for Textile Show Strongly Urged by Exhibitors

Survey shows overwhelming approval of revised schedule; other constructive suggestions made. . .

On page 74 of May COTTON an editorial presented a suggestion for changing the hours of the Greenville Textile Exposition from the present schedule of 12 hours per day, Monday through Friday (10:00 A. M. to 10:00 P. M.) and four hours on Saturday, to a schedule of 10 hours per day (9:00 A. M. to 7:00 P. M.). The suggestion had been advanced at this year's Show by an exhibitor, and received hearty endorsement from exhibitors and mill men with whom it was discussed informally during the week.

The Reasons

Back of the suggestion was the thought that an earlier starting time would be more convenient for mill men who arrive in Greenville during the early morning, and now must await the 10:00 A. M. opening; that the earlier closing would serve the interests of efficiency and convenience of the exhibitors, permitting them to make plans for dinner without feeling that their booths were being neglected, as is true with the show running until 10:00 P. M.; and that with the prevailing mill schedules, mill operatives and others now have ample time for attending the exhibit prior to 7:00 P. M. Furthermore, as many exhibitors have observed, the usual "evening crowd" at the show is largely composed of the general public who represent no interest and value for most of the exhibitors at an industrial exhibition of this kind.

It was felt that the change could be made without in any way decreasing the value and effectiveness of the exhibition for either the exhibitors or the mill men.

Up to this writing, we have heard formally from 60 of the exhibitors at the 1937 Show, commenting upon the suggested change. We projected the suggestion in a constructive spirit, realizing that the decision as to policy is entirely in the hands of the exposition management, under the guidance of the exhibitors. We therefore are making available to the management immediately a full report on the comments received, in a spirit of helpfulness. At the same time, it is felt that the exhibitors who have expressed themselves, as well as the industry generally, will be interested in a brief report of this "sampling" of opinion on the idea, and so a summary of the comments is given here:

Earlier Closing Overwhelmingly Endorsed. First, as to an earlier

closing hour, particularly for the first five full days of the week, out of the 60 comments, 57 unreservedly approved this change. Almost as many endorsed the idea of starting at 9:00 A. M. instead of 10:00 A. M.

A large number of the exhibitors expressed sentiments conforming to this comment from an important manufacturer:

"There is no question to our mind but that it would be very practical to have the show open at 9:00 or 10:00 o'clock and close at 7:00 or 8:00. We would prefer the period from 9:00 to 7:00. It has been our observation that where such shows remain open until late in the evening they become very tiresome, and little or no good is accomplished during the last two or three hours."

Another influential exhibitor, a machinery manufacturer, says:

"It is our feeling that most mill men are able to see all of the exhibits and meet most of their friends by the time they are ready to go to dinner. Very few of them return and stay for the last two hours of the show. As exhibitors we have felt the need of keeping important representatives in our booth as long as it was open. It would be a great relief if we could close up in time to go to dinner with some of our friends."

Space prevents quotations from all letters, but the foregoing two comments generally express the sentiment of those favoring the change.

There were 35 exhibitors who expressed a preference for a schedule of 9:00 A. M. to 7:00 P. M.; 2 approved running from 9:00 to 6:00; 1 suggested 9:00 to 8:00; 1 approved either 9:00 to 7:00 or 10:00 to 8:00; and 1 suggested 9:00 to 7:30. (These are details which can be worked out by the management—the main point is the approval of a change.)

None of these 40 firms made specific comment as to the hours for Saturday, but several others who endorsed earlier opening and closing hours for Monday through Friday made specific suggestions as to the last day, Saturday. One constant exhibitor approved shorter hours for five days, and added:

"I believe that the Saturday show serves no good purpose inasmuch as practically all of the mills are on a five-day week, and they are accustomed to having Saturday to themselves. The Knitting Arts Exhibition in Philadelphia, with which you are very familiar, has always eliminated the Saturday opening, and I believe with no detriment to those who are vitally interested in attending the show, and receive from it its full benefits."

This exhibitor further suggested delaying the opening of the Show until noon on Monday, to permit exhibitors to complete the final touches on exhibits during the Monday morning hours. Another faithful and important exhibitor said, "the closing hour on Saturday should be set not later than 2:00 or 3:00 o'clock, to permit northern exhibitors and attendants to leave on the 5:00 o'clock train." A loom manufacturer said, "It is ridiculous to put exhibitors to the expense of maintaining their exhibits, personnel, executives, etc., for the extra 24 hours for such a short session. The show should either be stopped on Friday night or continued down through Saturday afternoon or evening." Another exhibitor said, "Saturday afternoon is a failure as far as real interest is concerned, and we believe that the show might well be closed by 2:00 o'clock on Saturday to permit exhibitors to pack up and leave that evening." Another suggested eliminating Saturday completely; another favored closing at noon on Saturday.

Three of those approving the 9:00 to 7:00 schedule suggested operating for 6 full days at this rate. One suggested 6 days from 10:00 to 7:00; another 6 days from 9:00 A. M. to 8:00 or 9:00 P. M. One suggested six days: Monday, 12:00 to 6:00; Tuesday and Thursday, 9:00 to 6:00; Wednesday and Friday, 9:00 to 9:00; and Saturday, 9:00 to 3:00.

Two men emphasized the importance of having the general public in at least a part of the time; suggesting that one or two nights be devoted to this purpose. One man said he felt the present hours would be preferable, provided the attendance were limited to interested mill men.

Three Object to Shorter Hours. As stated, of the 60 comments, only three objected to the proposed change. One wishes no change at all; another suggests even a longer Show, submitting a plan for a Show opening on Thursday and extending through the following week to Saturday at 6:00 P. M.—a ten day show, with the intervening Sunday as a day of rest, and daily hours of 9:00 A. M. to 6:00 P. M. The third negative voter said, "The suggestion that hours be changed to a schedule of from 9:00 A. M. to 7:00 or 8:00 P. M. is ridiculous. These earlier hours will not be conducive to earlier retirement nor consequent earlier arising." He suggests opening at 11:00 A. M., and closing at 10:00 P. M., daily except Saturday, and opening at 10:00 A. M., and closing at 3:00 P. M., on Saturday. He said, "I have never heard of a circus opening early during the morning hours."

There appears to be considerable weight to the desirability of operating the exposition for at least a few hours on Saturday. With a Friday night closing, it would be natural for many exhibitors to desire to do their packing after the closing hour, which under the conditions of labor, etc., would not be entirely feasible.

A similar objection to running the show on Saturday into the evening hours is also evident. This would also keep the exhibitors in Greenville until Sunday, a point to which several have objected.

On the other hand, a curtailed schedule for Saturday, say from 9:00 A. M., to 2:00 P. M., would, it is felt, serve the end of convenience from the several different points of view. At the same time, it would provide just that much more time of display in the interests of those who do not feel that a 5-day show would be adequate.

In addition to those already quoted, several further suggestions were made. One—from an exhibitor at both Greenville and Philadelphia — suggested that there be at least two weeks between these shows. Another man expressed the feeling that a three- or four-year lapse between the Greenville shows would be sufficient.

As stated in the May article, the Exposition management will make a formal canvass on this point and other matters among the exhibitors for the 1939 Show, and, in the best interests of the Show, its exhibitors and the mills, will announce the final decision. Meanwhile, this survey of opinion is submitted as being of interest, with our thanks to those who have expressed their ideas concerning the thought projected in our May issue.—R. W. P.

Southern Textile Association Holds Annual Meeting at Myrtle Beach

THE 29th annual convention of the Southern Textile Association was held at the Ocean Forest Hotel, Myrtle Beach, S. C., on Thursday, Friday and Saturday, June 10, 11, and 12, and was a success especially in a social and entertainment way. The attendance was unusually large, more than 250 delegates registering—with associate members and lady visitors comprising the larger proportion of those present. The convention provided an occasion for contact among friends in the industry in the appealing and enjoyable setting of this beach resort. The only complaint as to the locale is that its diverting attractions do prevent a full attendance at the formal business sessions.

The convention consisted of three sessions of the association, one Friday morning, one Saturday morning, and the banquet on Friday evening; and a meeting of the Associate Members Division on Thursday evening. A joint golf tournament for members and guests was conducted on Friday afternoon.

At the concluding business session on Saturday morning, the following officers were elected:

Edwin M. Holt, manager, Mill No. 3, Erwin Cotton Mills Co., Cooleemee, N. C., was elected president of the association, succeeding Fred L. Still, superintendent, Victor-Monaghan Company, Greer, S. C. L. J. Rushworth, superintendent, Riverside Division, Riverside & Dan River Cotton Mills, Danville, Va., was elevated to vice-president, succeeding Mr. Holt; and Joseph C. Cobb, assistant superintendent, Chiquola Mfg. Co., Honea Path, S. C., was made chairman of the board of governors succeeding Mr. Rushworth. Marshall Dilling was re-elected as executive secretary, and B. Ellis Royal was named as secretary-treasurer. Mr. Royal, associate editor of *Textile Bulletin*, Charlotte, has been serving as secretary-treasurer temporarily following the death of the former officer, D. Harvey Hill, Jr.

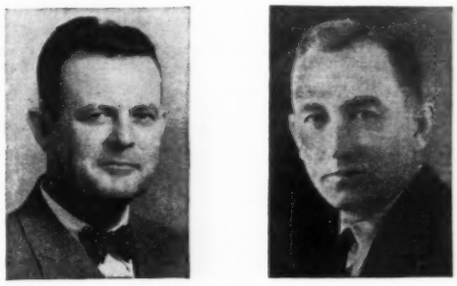
The following men were named to the board of governors for full terms:

Newton G. Hardie, superintendent, Inman (S. C.) Mills; P. B. Parks, Jr., superintendent, Mill No. 5, Erwin Cotton Mills Co., Erwin, N. C.; W. Lexie Davis, assistant superintendent, Proximity Mfg. Company, Greensboro, N. C.; and Harry H. Purvis, superintendent, Chicopee Mfg. Corp., Gainesville, Ga. O. A. Sullivan, superintendent, Gaffney (S. C.) Mfg. Co., was named to fill the unexpired term of Joseph C. Cobb, vacated by his election as chairman of the board.

Address of President Still

After the invocation by W. M. McLaurine, and a word of welcome by Edwin M. Holt, President Still, in opening the first session on Friday morning, presented the annual address of the president. He referred first to the association's year, explaining that "if our achievements have not come up fully to our plans and expectations, at least we have been laying solid foundations for future progress." He expressed his thanks to his fellow officers, and paid tribute to the late D. H. Hill, Jr., the association's secretary, whose death occurred in January 1937.

Mr. Still covered some of the problems of the industry, including advancing labor costs due to legislation, as well as other increased costs; and referred to the seriousness of the problem of imported cotton textiles, notably from Japan, and to the loss of the export market for American goods. "Foreign competition," he said, "is primarily a problem for the managements of our mills; however, we of the operating personnel cannot help but view with alarm this serious menace to our industry which if not retarded will eventually affect the livelihood of many of our people. We can do our part in helping to meet this competition in several ways: First, by producing superior quality goods, and this should be an easy matter with our well trained and highly intelligent southern-born people who as a rule are most anxious to excell in their work; second, we must find ways and means of reducing our cost of manufacturing, and at the same time hold up the standard of living of our people;



Left, Fred L. Still, the retiring president; right, Edwin M. Holt, the new president, of the Southern Textile Association . . . .

third, it is most important that we keep our machinery in the best possible condition so that we may produce not only a quality product but also raise the pounds of production per operative with the minimum amount of effort by the operative."

"It is most essential," said Mr. Still in his concluding remarks, "that every one in the industry take an active personal interest in the public affairs of our country, studying and keeping ourselves fully posted on comtemplated legislation. We who are in positions of authority in the textile field should strive at all times to educate and enlighten the general public on the many problems which confront our industry, and thereby gain a more sympathetic and favorable support from those who are not directly engaged in manufacturing."

Address of T. M. Marchant

The second speaker at Friday morning's meeting was Thomas M. Marchant, president and treasurer, Victor-Monaghan Company, Greenville, and past president of the American Cotton Manufacturers Association and of the Cotton Manufacturers Association of South Carolina. Mr. Marchant first discussed general economic conditions, declaring it essential that the country "must stop this wild orgy of spending and cost raising and start a program of budget balancing. Huge expenditures during a critical emergency may have

Associate Members Elect Snow and Randolph

THE Associate Members Division of the Southern Textile Association—the youngest, and at the moment the lustiest group in the organization—held its annual banquet at the Ocean Forest Hotel in Myrtle Beach on Thursday evening, June 10, preceding the convention of the parent organization. **Edwin Howard,** southern manager, Veeder-Root, Inc., Greenville, S. C., chairman, presided as toastmaster. Officers of the S. T. A. and other mill men present and their wives were guests. The entertainment consisted of a variety show staged by professional entertainers.

Randolph Snow Howard

George B. Snow, sales representative of the Atlanta Brush Co., Atlanta, Ga., was elected as chairman of the division, succeeding Mr. Howard. **William H. Randolph, Jr.,** Atlanta, southeastern sales manager of A. E. Staley Mfg. Co., was made vice chairman. **Junius M. Smith,** vice-president and business manager, Textile Bulletin, Charlotte, was re-elected secretary-treasurer.

been justified, but obviously if the government is to spend more than it takes in during a period of adversity, it stands to reason that we must take in more than we spend during the succeeding period of recovery." Re-employment, he said, will be aided more through the balancing of the budget than through all of the other legislative schemes that can be devised.

Discussing next the textile industry, Mr. Marchant declared that most southern mill men, like himself, favor a good high wage for the textile worker. "Neither am I an exponent of long hours in the textile industry," he said, "but it is high time that government and the public realize the fact that payrolls cannot permanently continue unless costs are kept sufficiently low to enable the mills to compete with other domestic and foreign mills, and unless the prices for textiles result in at least a reasonable margin within which tc operate now and assure future operation."

Next, the speaker pointed out that the textile worker is today better paid than ever before, is working shorter hours, and compared to agricultural workers and other industrial workers, is in an excellent relative position. He pointed out that the average gross income per worker in South Carolina textile plants in 1934 was $626.90; while the average gross income of the farmer was $121.10; that in 1936, Federal Trade Commission reports show, of each dollar spent by a cotton mill, the worker received $0.2557, and $0.4251 went for raw material.

Speaking of hours, Mr. Marchant said, "I am in favor of shorter hours, but there is a limit in that direction also, and we can't escape the conclusion that if a given mill has two shifts operating, manned by faithful workers, and that if the hours of those shifts are so decreased as to prevent the mill filling its orders, or if a third shift is added, either step would involve a reduction in the opportunities of earnings of the faithful workers; and in the case of a third shift will merely mean that the class of employees who have not been efficient enough to hold their jobs in the past, or not faithful enough, will be given employment at the expense of the faithful employees. I am very fearful of the effect of this third shift trend throughout the industry, and inevitably the tendency toward shortening of hours below a reasonable basis will force third shifts throughout the industry."

On the subject of collective bargaining, Mr. Marchant said, "this industry has always negotiated with its employees, but that is not what they are calling collecive bargaining now. Their idea of collective bargaining is not connected with the representation of the individual, but is rather a racketeering effort to set up a situation whereby outside labor leaders may secure exclusive representative of the working people,

Left, L. J. Rushworth, new vice-president; right, Joe C. Cobb, new board chairman

whether the working people wish it or not. Such a step is unfair, and no right-thinking manufacturer should be forced to talk to an outsider about the problems of his workers to the exclusion of conferences with his own workers on the subject. In the final analysis, this whole collective bargaining program is not a fight between the employer and the employee in the textile industry, or other industries, but rather is a fight between the two conflicting interests within labor itself, each of them trying to gain exclusive representation."

McLaurine and Philip Speak on Saturday

The third and concluding speaker on the Friday morning program was Walt S. Goodwin, lecturer, who delivered a forceful talk on the subject of foreman leadership, reviewing and stressing those qualifications which go into making the successful foreman and leader today.

Results of the golf tournament, held on Friday afternoon, are reported elsewhere in this story.

The annual banquet of the association on Friday evening, with President Still as toastmaster, was featured by excellent entertainment provided by the Henderson School of Music, of Charlotte. In a drawing of attendance prizes for ladies, conducted by P. B. Parks, Jr., a number of prizes including towels, sheets, and other textile products were awarded.

W. M. McLaurine, secretary-treasurer of the Amer-

Winners in S. T. A. Golf Tournament

PRIZES for the annual golf tournament of the Southern Textile Association were as usual divided into two groups: those for active (mill men) members, and those for associate members. F. Gordon Cobb won the bowl given by Corn Products Sales Company for low gross score among active members, and a leg on the larger bowl given by the company, to be retained by the active member winning it three times.

W. H. Miley, Jr., superintendent, Erwin Mill No. 2, Erwin, N. C., won the prize for second low gross score for mill men. **J. W. Robison**, of Pacific Mills, Columbia, S. C., won first low net for mill men and **Edwin M. Holt** won second low net. Consolation prize, given for the highest gross score among mill men, was awarded to **P. B. Parks, Jr.**, of Erwin.

H. B. Smith, of Greenville, S. C., won low gross score prize for associate members; and **W. B. Uhler**, of Borne-Scrymser Co., Spartanburg, won second low gross. **H. N. Alford**, of Barber-Colman Co., Greenville, S. C., won first low net among associate members, with **J. B. Henderson**, of Parks-Cramer Co., Charlotte, N. C., taking second low net. **Earle Mauldin**, southern editor, **Textile World**, received the consolation prize for highest gross score among associate members.

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ican Cotton Manufacturers Association, Charlotte, N. C., was the first speaker on the Saturday morning program. He delivered a splendid inspirational address, urging the textile operating executives to be awake, alert and progressive, and not to resist constructive change which, he declared, is a law of life; and every fundamental change brings the world more nearly to the ideal. He stressed the growing importance of human personality, and expressed faith in the true leaders of industry. Mr. McLaurine concluded with a strong appeal for more research in industry of the practical type.

Robert W. Philip, editor of COTTON, followed Mr. McLaurine, speaking informally of the human interest side of the recent trip to Japan by the American Textile Mission, of which he was a member as secretary; and telling the mill men some impressions gained from visits to Japanese textile mills.

During the business session which concluded the convention, Marshall Dilling reported that the finances of the organization are in better shape. On motion of R. O. Stutts, W. M. McLaurine was elected as an honorary member of the Association. A resolution of regret in the passing of D. H. Hill, Jr., was adopted. Culver Batson reported as chairman of the research committee of The Arkwrights, Inc., describing tests on yarn variation which the committee had had made by students in two southern textile schools, copies of which were distributed at the meeting. Mr. Batson was also called upon to present the retiring president's medal to Mr. Still. Officers were elected for the coming year as reported earlier in this story.

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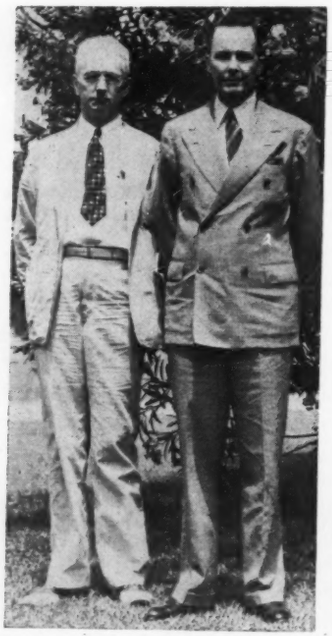
Wellington, Sears Hold Conference of Salesmen and Manufacturers at West Point Mills

A group of Wellington, Sears and West Point executives in front of the new laboratory building at Shawmut Mill. Harry L. Bailey is seen in center with arms folded, between C. A. Sweet, left, and George Lanier right . . .

WELLINGTON, SEARS CO., sales agents for 17 mills, including those of the West Point Manufacturing Company, held a conference of its executives and salesmen and the executives of its mills from June 21 to 25. The first two days were spent at the West Point mills, and the visitors inspected the new textile laboratory at the Shawmut (Ala.) Mill, as well as the five mills of the West Point company and that of the Lanett Bleachery & Dye Works. For the last two days of the conference, the party went to New York.

The new laboratory at Shawmut, which is just being completed, represents the "last word" in textile testing. It is fully equipped with all kinds of testing instruments, with complete atmospheric control, and air-conditioning in the office and reception room.

Harry L. Bailey, president, Norman S. Hope, vice-president, and Charles A. Sweet, secretary, headed the delegation in attendance from Wellington, Sears Co. Geo. H. Lanier, president, and Frank B. Williams, agent, and all of the operating executives of the West Point group were there; as well as the executives from the other mills in Georgia, Alabama, South Carolina, Tennessee and Texas which are represented by Wellington, Sears Co. Salesmen from the Atlanta, Boston, Chicago, Detroit, St. Louis, New Orleans, San Francisco and New York offices of the company were also in attendance.



At left, Paul K. McKenney the new president, and right Fuller E. Callaway, Jr., the new vice-president, of the Cotton Manufacturers Association of Georgia . . . .

Industrial Relations Forms Keynote of Georgia Meeting

INDUSTRIAL RELATIONS formed the major theme of discussion at the convention of the Cotton Manufacturers' Association of Georgia, at Sea Island, Ga., June 3 and 4. This efficiently and effectively operated state organization always has a profitable and enjoyable meeting, and the one this year was no exception in stressing the current problems of its members. In addition, as usual, the entertainment and recreational features of the occasion were delightful, and a record-breaking crowd was in attendance.

William N. Banks, president of the Grantville (Ga.) Hosiery Mills, and McIntosh Mills, Newnan, Ga., presided at the sessions as president of the association, in a capable, gracious and effective manner. His own address at the opening session was a gem of oratory and contained much sound logic and interpretation as the keynote of the meeting. Following him were two outstanding industrialists—Preston S. Arkwright, president of the Georgia Power Company, Atlanta, and C. S. Ching, director of industrial and public relations of the U. S. Rubber Company, which operates, among other plants, three textile mills in the South. Several other addresses and reports, on pertinent topics, rounded out the program of the convention fully.

Paul McKenney Is New President

Paul K. McKenney, president of the Swift Mfg. Company, Columbus, Ga., was elected president of the association, succeeding Mr. Banks. Fuller E. Callaway, Jr., president, Callaway Mills, LaGrange, Ga., was made vice-president of the association succeeding Mr. McKenney; and Hill Freeman, president, Newnan (Ga.) Cotton Mills, succeeds Mr. Callaway as treasurer. The following were elected to the board of directors:

Lanier Branson, Sibley Mfg. Co., Augusta; C. L. Hamilton, Crown Cotton Mills, Dalton; W. D. Anderson, Bibb Mfg. Company, Macon; Frank B. Williams, West Point Mfg. Co.; H. Gordon Smith, U. S. Rubber Products Co., Hogansville; J. C. Platt, Chicopee Mfg. Corp., Gainesville; and D. A. Turner, Eagle & Phenix Mills and Columbus Mfg. Co., Columbus. T. M. Forbes, secretary, and C. T. Kilgore, traffic manager, were re-elected.

A resolution adopted by the association opposed the pending Black-Connery Bill on wages, hours, etc., but expressed approval of legislation designed to permit each individual industry to initiate and execute plans to increase and stabilize the earning power of employees. Other resolutions requested amendment of the undistributed profits tax law to provide proper exemptions for plant expansion and improvement and to permit creation of prudent reserves; expressed approval of the recent textile mission to Japan; authorized continuance of the association's efforts in publicity and dissemination of facts concerning the industry to the public; and memorialized those members who had passed away during the year.

Address of President Banks

In his address as association president, Mr. Banks treated largely of general conditions of the country as a whole and in the industry, declaring that the

WILLIAM N. BANKS, of Grantville, Ga., the retiring president of the Cotton Manufacturers Association of Georgia . . . . . .

progress of this nation has come from a spirit of liberty and freedom, founded in the constitution; he declared that much criticism of industry overlooks the great strides that have been made and the present standards of America, which are higher than anywhere else in the world. He declared that the passage of the Black-Connery Bill, with a minimum wage of 40 cents per hour and a maximum work week of 40 hours, "would increase our costs about 25 per cent and result in part time operation of the mills. This would mean a substantial decrease, rather than increase in our annual payroll. * * * More and more it will be realized that permanent prosperity must result from increased production and not from a planned economy which advances cost through regulation of production, wages and hours to such an extent that our costs are too high to compete in the markets of the world and also too high for domestic consumption."

Speaking of legislation, he said, "we are hopeful that the inequities of the Wagner Bill will be removed. This bill defines unfair labor practice on

At left, R. Hill Freeman, president of the Newnan (Ga.) Cotton Mills, elected treasurer of the Georgia Association . . . . . At right, Theodore M. Forbes, the capable secretary of the Cotton Manufacturers Association of Georgia . . . . . .

the part of the employer but not on the part of the employee. An amendment should be drawn to protect the rights of those who do not want to identify themselves with any organization for collective bargaining, but who prefer to make their own individual trades without the fear of coercion or intimidation from any source."

Mr. Banks urged complete fairness to workers as the best means of forestalling strikes. He declared that, "if our employees want to organize and bargain collectively this is their right and privilege according to the law, but it is my personal view that the relationship between employer and employee should be so close that no third party should ever be needed by employees to handle their problems for them. * * * We think our employees are entitled to more factual information about the different phases of the business in which we are engaged. Oftentimes the only information they get comes from sources unfriendly. We would no doubt be amazed if we knew some of the things that have been circulated about us. We should take our employees into our confidence, and let them know the true facts as they exist."

Mr. Banks commended highly the publicity program of the association, "Let's Keep the Cotton Mills in Georgia," and urged its continuance.

The remainder of the Thursday morning program was devoted to two forceful addresses, by Mr. Arkwright and Mr. Ching, emphasizing the subject of industrial relations. The import and application transcend the state association to which they were presented. Both took the gloves off and spoke frankly and honestly on a subject of currently prime importance. Instead of a digest of their remarks here, generous abstracts of their remarks are presented on pages 58 and 59 of this issue, with the recommendation that they be carefully read.

Report on Publicity Campaign

Reports at convention business sessions are sometimes dry, and dull, but the reverse was true at Sea Island. A highlight was the presentation of the work done by the publicity committee, given by Norman Elsas, of Fulton Bag & Cotton Mills, chairman. This activity took the form of a publicity campaign consisting of a series of advertisements in every daily and weekly paper published in the counties of Georgia which contain cotton mills. The series was fully described in an article on page 102 of April 1937 COTTON. The purpose was to create a better appreciation, in the minds of the people of the state, of the importance of the cotton textile industry in the social, political and economic life of the state, by presenting facts and figures about the Georgia mills, with particular emphasis being placed on their value to the local communities in terms of jobs, payrolls, taxes, and new wealth. In addition to the newspaper advertising, the advertisements were reprinted in booklet form for distribution to legislators, educators, etc.

The publicity and educational program of the Association is in the hands of its public relations committee, which is assisted in its execution by the Johnson-Dallis Company, of Atlanta, as advertising counsel. Ernest E. Dallis, of the agency, assisted Mr. Elsas in the presentation of the report.

Mr. Elsas highly commended the program and its results, and the new president, Mr. McKenney, urged its full continuance.

In the annual golf tournament of the association, always an enjoyable feature of this convention, Walter M. Wellman, of Athens, Ga., won first prize in the blind handicap play, a Callaway cotton suit; Ernest D. Key, of Atlanta, won second prize, two dozen U. S. Royal golf balls. William Terrell won low gross prize, a Fulton Trav-L-Bag, with a score of 74; J. W. Dudley, of Athens, was runner-up, with a 78, winning a package of Georgia-Kincaid bath towels. Low net and second low net prizes, West Point towels, were won by Ted Lewis, of LaGrange, and S. W. Quisenberry, of Atlanta, respectively. I. A. McDaniel, of Cartersville, received a pair of Canton overalls for making the highest gross score.

What Is Resistance?

The property of any material to oppose the flow of electricity through it, is called "resistance." The unit for the measurement of this resistance or opposition to the flow of current is the "ohm."

Even the best of conductors have some resistance; poor conductors have much resistance; insulators have very high resistance. The unit for the measurement of very low resistance is the 'microhm," and is equal to one-millionth of an ohm; the unit for very high resistance is the "megohm" and is equal to one million ohms.

Resistance in a conductor varies directly as its length and inversely as its area; the greater the length, the greater the resistance; and the greater the area, the smaller the resistance.

Resistance may be compared to the friction encountered by a flow of water through a pipe. A straight pipe, smooth inside, conducts water with little loss of pressure. If the pipe is rough inside and has many bends, the loss of pressure and the rate of flow will be greatly reduced. Similarly, a good conductor allows electricity to flow with small loss of voltage; a poor conductor offers a large resistance and so causes a corresponding large drop in voltage. The energy used in overcoming resistance is converted into heat.—*E. M. C. Fairbanks-Morse.*

Arkwright Speaks Plainly on Labor and Legislation

By Preston S. Arkwright
President, Georgia Power Company

At the convention of the Cotton Manufacturers Association of Georgia, Sea Island, Ga., June 3, 1937.

● *An outstanding public utility executive, who deals with labor unions regularly as representatives of his employees, spoke out of his experience to the Georgia cotton manufacturers. With industrial relations constituting the paramount subject of interest today, we are glad to make the following substantial abstract of his remarks available generally.*

I COULD SAY a good deal about the Wagner labor law. It's unfair, of course. It's intended to be unfair. It's a rule that won't work both ways, and naturally it's a poor rule. It puts all sorts of burdens and responsibilities on employer and gives him no rights. It grants to labor organizations all sorts of rights and puts on them no responsibilities or duties. It even legalizes the strike, but it doesn't define the strike. Strike is warfare, and it puts into the hands of labor all weapons of offense and takes away all weapons of offense and defense from the employer. It legalizes the closed shop and forbids the closed non-union shop.

It's like putting you into a prize fight with somebody and letting him have brass knucks or a horseshoe in his glove and biting and kicking and gouging, and making you fight according to the Marquis of Queensbury rules. It can be no fair fight. It's like playing a game of golf where the other fellow can tee up in the fairway and kick out of the rough and place it on the green and do anything else he wants to, and you've got to play by the rules. What kind of fair game would that be?

I sat on the Regional Committee on Section 7-A of the NRA, from which this bill was drawn. They will not call an election at the request of the employer, nor will they call an election at the request of the employee if there is any reason to believe the employer is willing. They will call them only at the request of the employees or an organization. So the election will be called at the most appropriate moment. They would entertain no complaint from employer against employee, because the employee was put under no duty and no complaint could be made.

We could criticize it all day long, but what good would it do us, except a little satisfaction in cussing out the other fellow? It's there. It has been sustained by the court, but it wouldn't have been sustained ten years ago, as you well know. Courts are just as susceptible to public sentiment as anybody else, as you have had evidence. Federal courts today regard themselves as a branch of the Department of Justice—so-called. They are just human beings like anybody else, and are influenced just like anybody else by their attitude and their own conception. Don't rely on a lawyer's advice. They don't know what the law is. They would have told you what the law was a few years ago, but today they don't know. Of course the Chief Justice is right. The law is what the court says, but who knows what the court is going to say? Don't you ever let a law go because your lawyer tells you it's illegal; don't rely upon that. It may be, but the best way is to keep it from passing if you can, if it is unreasonable and unfair.

"Be Fair and Just and Liberal"

I don't think you should take a defeatist attitude about this thing. I don't think there is much your Association can do about it. I think you've got a movement in the Federal government which you can't resist, and I don't mean by that that you should feel defeated. There are a lot of things you can do. Don't be *good* to your employees—be *fair, just* and *liberal* with them. Give them as much unorganized as you would give them if they could make you do it. Don't see how little you can pay; see how much you can pay. I happen to have had comparisons made of my wages and union wages, and any man that reads that will go and join a union. I counted myself a fair employer, too, before I had it, and I deserved to have a union in my business. I underpaid them, overworked them, discharged them without a reason, didn't let them argue their case, and I deserved to have a union.

Now I say that in dealing with employees—you know more about it than I do, except I've had my dose—deal fairly with them; pay as much as you can; listen to their complaints; provide machinery of redress for their grievances; let employees bring them up to the chief executive officer; let him review the action of the superintendent and the manager and the foreman, or whatever you call him. Don't let 'em go out on a whim; let 'em understand that they have an opportunity to present their case and get fair treatment. I don't think you can win people by giving them anything. It's all right to give them things if you want to, but that isn't what they want. They want to earn it and receive it and get paid for it, and then if you want to give them something else, very good. But they get the idea that gifts come out of the pay roll and pay is less where gifts are granted. It may not be so, but that's what they feel about it.

"Cultivate the Public Confidence"

I don't care how well you men run your businesses, if there's anybody in a cotton factory in the state that does not run his well, it's your business to see that he changes that, for you are going to suffer from it just as much as he does. If there are any faults in the business, search 'em out and correct 'em, or they'll be corrected by law, and when they are corrected by law they go beyond correction and become punitive. Maintain the fair attitude. The federal government can't take all the powers away from the state. Some of them reside here, certainly in the police power, certainly in the act to suppress coercion and violence. Certainly local taxation resides in the state. Many powers, no matter what they do, will remain; they can't all be taken away, and the day may come when they will be restored.

Make it your business to preserve and maintain the conservative, fair attitude of the state towards industry. Tell the public what your business means; tell the farmer, tell the railroad man, tell the merchant, tell the banker, tell everybody of every relation of your business with theirs. Tell it to them—don't let them wean away the farmer from you when you know he depends more on you than anyone else. Don't let them do it.

I don't know how much you do take part in things, but I think a business man is apt to shut himself up in his own mill and say, "This is my business. This takes all my time. This is what I'm going to do, and all I'm going to do." Make yourself a part of the state and the community, a party of it in everything, political also.

At the last session of the legislature I had a gentleman ask me what he could do about some bills.

I said, "Well, you've got some friends in the legislature, haven't you?"

He said "No".

I said, "Surely you have some representatives of the county that you know". But he didn't. Many men don't even know the names of the representatives of the county; many of them haven't got a speaking acquaintanceship. You can't make friends with those fellows after they get elected.

A cotton mill owner ought to be the main man in the county. He furnishes more employment, pays more taxes; he ought to be an intelligent man; he runs a successful business; he stands high in the community. He ought to have more friends in the county than anybody else. Don't let anyone get elected to the legislature that you don't know. You see that politics does affect your business. I don't mean get mixed up in politics, but you can get the support of all the representatives from your own county, and maybe the Congressman too, instead of letting him go to Washington and be influenced by people from Wisconsin, Nebraska, Washington and Oregon, North Dakota, or wherever else they come from. He gets the idea that those fellows know more about industry down in Georgia than he does, because you don't tell him anything about it.

If you've got to recognize a union, relax and enjoy yourself. Don't take it too hard. I say if you've got to do it, if possible do it amicably. Don't start out with ill will and hatred. Don't start out with their making you do it.

We are very fortunate in Georgia in the type of our working people—very fortunate. We are very fortunate in Georgia in the type of the labor union leaders. I know what I'm talking about. Mr. Nance, who is the head of the CIO organization for cotton mills in Georgia, is not a bad man. He believes in unionization, certainly—that's his business. But if you don't consider that radical, then after that's all over you'll find him rather conservative.

I don't know what you're going to do; I don't think you have to do anything you don't want to do; but I think we have all got to adapt ourselves. You can't get any of these things repealed. I don't even think much of amending the Wagner law, because every time Congress passes a law they add something else. If they amend it they'll make it worse. I say to you that I would rather deal with any labor union or any labor union organizer or any group of employees, than to deal with any governmental commission or body. You will get fairer treatment, juster treatment, more understanding, from the labor union organizer himself, than you will from members of a commission in Washington.

They base all these things on interstate commerce. In the Ellenbogen bill they recite that the cotton manufacturing industry is affected with the national public interest sufficient to justify regulation by the government, all of which you know is a lot of rot. The fact that your mill is engaged in interstate commerce is also a lot of rot, in spite of the Supreme Court, in my opinion. They don't care anything about it. It's all a mere subterfuge. They want to regulate your business; that's what they want to do, because it suits the greatest number of voters. You don't vote and you don't control any votes, and you exert no influence whatever on national legislation. You are not entitled to and I'm not either—we let the thing go by default. We are in a separate class and a despised class. Every politician in the national government is against us, and we don't do anything about it. We've got to create an understanding, and if you'll do that among the people, you'll find them responsive and you'll find them unresponsive to these attacks on you, and then the attacks will cease.

"Sell Industry to Labor and Public", says Ching

By C. S. Ching
Director, Industrial and Public Relations, U. S. Rubber Co.

At the convention of the Cotton Manufacturers Association of Georgia, Sea Island, Ga., June 3, 1937.

● *Mr. Ching spoke straight from the shoulder, at the American Association meeting in Washington in May, and at the Georgia convention at Sea Island last month, on employer-employee relationships, which his ability, experience and position eminently qualify him to discuss. The following adaptation of his informal remarks at Sea Island contain thoughts that every textile mill executive—every employer of labor—should study carefully. They have especial significance in the current situation in textile manufacturing and other industry.*

WE INDUSTRIALISTS in America have lost our hold on the American people. Are your employees thinking the same politically as you are? Are they impressed with the same economic facts as you are? I doubt it. We have gone on in industry doing an excellent job. Our job is production, the production of goods and the distribution of such goods to the American public, receiving our compensation from the American public on the basis of how well we have done that job. We have taken it for granted that the American public is understanding our economic system. Evidently they do not. We have taken it for granted that our employees realized all of the benefits that accrued to them as a result of the economic system which American industry has built up. I think perhaps we are wrong in that assumption.

It is quite apparent that in order to appeal to the masses of the people we must dramatize a situation and make it appeal to the emotions rather than to the reason. The politician has learned that—industry has not. We have gone on and on and on, doing the job that we supposed we were here to do, in the production of goods and services; and at the same time, while we were so busy selling the products of our mills and factories, we forgot all about selling industry itself to the American public, and now we have the result.

In dealing with employees it seems to me that many times we set up an organization, we employ the Golden Rule at the top, but even the Golden Rule will not work without a proper organization to carry it out. We have many times set up our employment or industrial relations on the basis of a welfare director, and all of the relationships between employer and employee rested with the foreman, the overseer, the section hand, etc. No central policies for building up relationships and inspiring confidence. The difficulty of applying certain things to this situation that might be termed what is good for the employee, is the fact that you might determine ice cream was the proper diet for the employee on this occasion, and it might be the proper diet, but if the employee had eaten lobster a short time before,

the combination might result disastrously.

Many times the very things that we are trying to do for our employees, instead of with our employees, result in a combination of circumstances and produce exactly the opposite reaction to what we expect.

We are too apt, in dealing with employee relationships, to listen to the employee or the group of employees who will tell us what we like to hear, rather than endeavoring to find out what the whole body of employees are thinking about. The best way to arrive at what employees are thinking about is to have some type of contact well organized within a plant that will permit of this. Too many times we kid ourselves by saying, "I am the manager of this plant. There is my office door; any employee in the plant can walk in there any time he wants to and speak his mind." Perhaps he can, but I doubt it. I would consider an overseer rather lacking in manly qualities who would want the people in his department running into the manager's office and spilling stuff. I think you will find that the door, although it is open, induces very few people to come in. And don't kid yourselves that things are all right because they don't come in when you say so. That is just plain human nature.

In dealing with employees one of the first essentials is for a management to give to the employees its confidence. You can never get the confidence of employees if you are expecting the worst from them; if you are expecting a bad reaction from employees in anything you do, you will get it. If you expect the best and organize for it and give the proper information, you'll probably get a good reaction.

Spy-System is Dangerous

I can't conceive of us ever having proper relationship in industry if we maintain a spy system on our employees. We have been too much given to dealing with our employees like hired hands, and not thinking of them in terms of being members of an organization. We have done very little in the way of giving them information in the form that they can understand. Our great difficulty is that many of us are looking for panaceas. We will jump out and buy something from the National Association of Manufacturers or some other organization, and we believe it fits us perfectly. If you read the *Saturday Evening Post* and study the advertising and figure out how much of that advertising is there to flatter the president of the company and how much of it is there to sell the product to the American public—you will see that too much of our thinking along the lines of employees' activities is how a thing hits us. We forget all about how it hits the employee.

We had the confidence of the American public, we had the confidence of our employees, and we lost it. What would you do if you had a good account and lost it? How do you go about keeping an account in selling goods? You keep the prospect or the customer sold all the time. You see to it that every contact with the customer is right. You don't permit your competitor to come in and unsell the customer on your product if you can avoid it. You don't merely accept orders and say, "Well, if there's anything wrong the door is always open." You don't sell goods that way, but that's the way we have sold confidence to our employees. We have failed to take into consideration the various factors that are at work in this situation and the various types of salesmanship that are being used against us both by politicians and by others.

Mr. Ching at Sea Island

I think it's a very lame excuse for any one of us to blame it on the outside agitators when one of our plants is tied up as a result of our employees quitting work. In our own company we would be in a very sorry position if we lost a good account and our sales department started to blame Goodyear for taking the account. No, we would begin to investigate our own sales department. We would investigate the type of product we had to sell; we would see whether we were right or not, and if they got the account away from us we wouldn't start in blaming them or calling them names.

That's about the way we've worked in these labor situations. We get emotional about it when something develops; we don't think in terms of operating according to principles rather than emotions. We get all excited, and many times some of the greatest executives in this country have made newspaper statements that they had to eat later on.

In dealing with this situation, we must consider it from the viewpoint that there is a wave of hysteria sweeping over this country. What the result will be, I do not know. Our job, however, as I see it, is to keep plants operating. We wouldn't tolerate any shutdown of our plants because of lack of raw material or breakdown of equipment. We would consider that a tremendous emergency and do everything possible to prevent it. Our job now is to see to it that we are sufficiently familiar with all the conditions within our plants so that we will keep our plants operating.

How to do that depends entirely upon what the situation is. But, believe me, we won't keep them operating if we get emotional about it. Employees have a right to organize. The policy of our company is now and has been over a period of 18 years that employees in our plants have the right to organize in a union. They have the right to select any representatives that they see fit, and we will deal with the representatives of our employees regardless of who they are; anyone representing any group of our employees—it is not our business to find out what his antecedents are or what he thinks or whether he's a candidate for the presidency in 1940 or whatnot. Our business is to deal with the representative of our employees and deal with him in a reasonable way, deal on the basis of facts. You don't have to agree with anybody any time, but you can never afford to be disagreeable.

We are dealing with unions, dealing with employees' committees; we are operating one or two small plants where we don't have a committee system—but we do make it a point, and have all along, to try to get across to our employees some of the fundamental issues in this situation, and how the economics of the situation affect them.

Pick Issues Carefully

There is one other point I would like to make. I learned it in a hard school. When a man is in charge of a labor union or attempting to organize a plant, he is looking for issues. And 99 times out of a 100 we stupidly rush right in and make one for him. We pick out some issue on which to fight that we can't stand on later on when conditions change. *Never make an issue out of something you are not willing to go all the way with.* Never make an issue out of something you are not willing to go before the public with and say, "This is the issue and it is clear-cut. It is not capable of

any misinterpretation. This is the issue in this case."

If you are sound on that issue you needn't worry about the results, because people in the organized labor movement are just as susceptible to public opinion as anybody else, and they know what issues they can go before the public on. I know of a case of a large company within the last 30 days. The majority of their employees had joined a union, and the management, when the union representative wanted to see them, said they weren't going to have any so-and-so outsiders come in representing their employees. They made an issue. A strike resulted, but finally they had to give in and deal with the outsiders.

What in the name of heaven is the sense of making an issue when you know you are due for a licking? We do that right along. If your employees belong to a union they belong to an organization, and to the extent that you recognize them as representing a union and belonging to a union, you are representing the whole works from soup to nuts. Many times one of these international officers stepping into a situation is what saves it.

I believe that the type of labor leadership we are going to have in this country in the future in organized labor is going to depend a lot on the way we conduct ourselves. I think many communists are made by calling them communists, and they want to prove you are right. I don't think we will be able to settle matters as far as organized labor is concerned, by digging up past records and calling names. I think that our employees and the people who join these labor unions are quite capable of exercising their own discrimination in selecting their own leaders. Our job is to deal with the situation as we find it, in a reasonable way, not in a wishy-washy way, and be just as firm in our stand when we know we have an issue we can take before the public as we would be free to concede an issue where we knew we were wrong.

I think we are too much dependent for the interpretation of our labor policies on our men way down the line. We have found it necessary in our company, in every plant, to have a man there, not a welfare director, not a back-slapper or hand-shaker, but someone who understands the business. In many instances we have selected our best type of industrial engineer, who is entirely familiar with rates, wages, and all that sort of thing, someone who knows how to handle people. Have that man responsible for carrying out your labor policies. I'm not talking about employment. That's important; the employment department should be properly functioning. But, you can get 100 different supervisors in a plant, and have 100 different interpretations of policy.

I was talking with the manager of one of our plants the other day about a certain man we had who had resigned. I asked him how the new man was getting along, and he said, "Well, the only difference between the two men is this: In one case Walter would do exactly the same as Tom does, but when the fellow left Walter he was mad, and when he leaves Tom he is smiling." Some men have the faculty of handling situations, but if you are going to have something in the way of a uniform policy that's going to keep the president of the company from spending most of his time in the future handling labor relations, you'd better see to it that you have the type of man in your plant who can deal with them when they arise, because none of the things that we read about in the newspapers as causing strikes, cause strikes. The causes of strikes are all hidden. It's something that's going on underneath. It's a little resentment here and an irritation there, and the development of that, added to rumor and misinterpretation and something else, finally results in an issue, and you've got to have an issue because none of these little things is of sufficient consequence to create a big issue. That has been so apparent in many of these major disturbances in the last few months, where it has been necessary for some of the highest executives in this country to spend the major portion of their time in dealing with this labor situation.

It can be handled down at the plant, where it occurs, if it is not too late. We must, if we are going to get anywhere, get back again the confidence of our employees in American industry, because the confidence of the public is reflected by the attitude of employees, and it doesn't make any difference whether a plant is unionized or not unionized, the fundamental problem remains the same. We are going to have to deal with people and sell American industry and confidence in its institutions to our own employees first, and they in turn will make themselves felt in the community and in the whole political situation.

1936 World Output of Rayon Breaks All Records

World production of rayon aggregated 1,303,165,000 pounds in 1936, an all-time high, and compared with 1,072,795,000 pounds produced in 1935, a gain of 230,370,000 pounds or 22 per cent.

Of the total 1936 world output Japan manufactured 320,850,000 pounds, a new high for all time or 25 per cent of the world output, according to the compilation. This compares with an output of 237,945,000 pounds reported for 1935, or 22 per cent of the world total for that year.

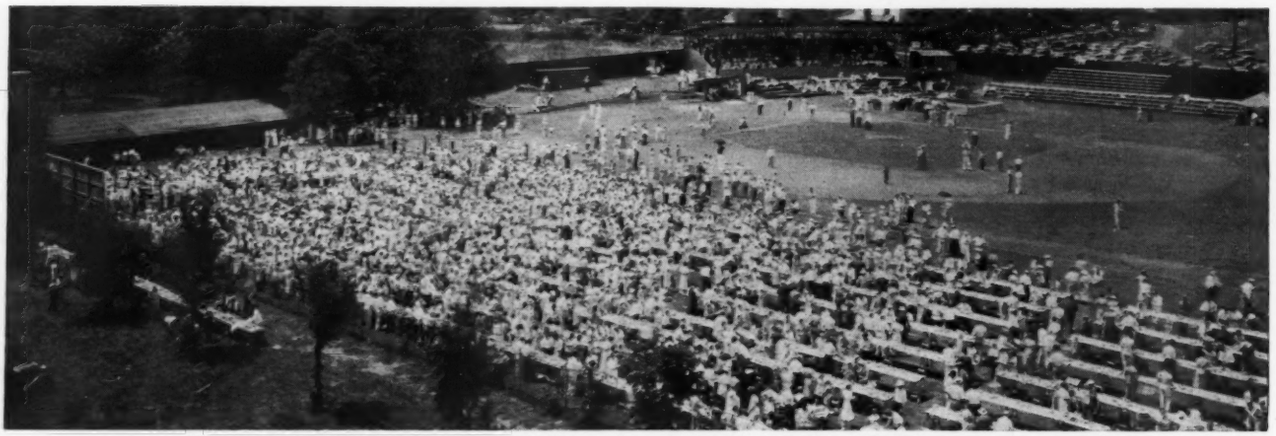
The United States in 1936 produced more rayon than in any other year in its history, but, because of Japan's sharp gain, its percentage of world output was less than reported in 1935. United States' rayon production last year aggregated 290,025,000 pounds or 22 per cent of the world total. In 1935 this country produced 25 per cent of the world total for that year with an output of 262,760,000 pounds. Based upon a strictly production basis, increases in rayon output were fairly uniform in all countries in 1936 compared with 1935. Outstanding increases were shown by Germany, Great Britain, Italy, Japan and the United States. Decreases in production were reported by France and Spain, the output of the former being affected by reduced exports, while the output of the latter was reduced because of the Spanish civil war. Argentina and Rumania were added to the list of world commercial producers of rayon during 1936.

The most interesting aspect in the figures of expanding production among the world's leading rayon producers is that Japan's increased production is due almost entirely to that country's efforts to keep pace with demands made upon it by rayon importing countries, whereas the efforts of United States producers to increase output is due almost entirely to satisfy domestic demand, according to the *Rayon Organon*.

Booklet by Alexander

Alexander Brothers, Inc., Philadelphia, Pa., has published an informative booklet showing that there are leather products for every industrial purpose. Tables are included for the horse power ratings of regular tanned oak leather belting, and belt speeds in feet per minute. Another table interesting to the mill man is the correct distance between pulley centers. One of Alexander's consulting engineers has written an article entitled "Why Monobelt" which will be found valuable to the reader.

Captain Meikleham's 65th Birthday Party



A part of the crowd at the barbecue in the ball park at Lindale . . .

CAPTAIN HARRY MEIKLEHAM became 65 years of age this year, and the people of Lindale made his birthday the occasion of a remarkable demonstration of their affection, respect and loyalty to him. This took the material form of a gala celebration in the ball park at Lindale on Saturday, June 5, embracing a morning devoted to races and other field activities; brief exercises during which Bill Vereen expressed, in a brief speech, the feelings of the Captain's friends and co-workers toward him; a barbecue; and a baseball game in the afternoon.

Captain Meikleham, as practically everyone in the textile industry knows, is agent of the Pepperell Manufacturing Company, at Lindale, Ga. He has been there for 37 years, taking the job as agent when the plant, which was acquired in 1926 by Pepperell, was the southern plant of the Massachusetts Cotton Mills. For more than a third of a century, therefore, he has been in fact the head of this plant and the accepted leader of the people of this outstanding mill community, located in Floyd County on the outskirts of Rome. His reputation as a textile manufacturer, and more important, as a real leader of his people, has for years been industry-wide. Few men in the industry have so many friends, scattered far and wide, as this rugged, aggressive, wholly individualistic and unique character.

But it is to and with the people of Lindale that Captain Meikleham has devoted the most of himself, his energies and a natural gift of leadership. Lindale—its progress, the high caliber and straight thinking and actions of its thousands of people—and Captain Meikleham have been synonymous since the beginning of this century.

And in the celebration of his 65th birthday last month, the material demonstration of the accumulated loyalty and devotion of his people to a man was most inspiring. More than 3,000 people—mostly residents of Lindale—were there, and badges were worn by most of these, signifying the length of service at the mill. Many wore 40-year badges, their tenure exceeding that of the Captain's, still more showed 30 years of service, and the number of 20- and 15-year badges were legion. "I helped lay the foundation in No. I Mill"; "I've been in the card room for 27 years'; "Why, I remember the day Cap'n came to Lindale"; these and similar comments heard by one mingling in the crowd were typical.

The climax of the brief ceremonies came when Miss Julia Tucker, an employee of the company, presented to Captain Meikleham a beautiful gold pocket watch, in behalf of all of the employees—a watch that had been bought with individual contributions from practically every employee of the mill. Captain Meikleham characteristically substituted it then and there for the watch he had previously carried, and his real feelings of sentiment and appreciation came out through that rough and rugged exterior in a brief talk of thanks to his people.

CAPTAIN H. P. MEIKLEHAM has been in the textile industry since his early boyhood, starting in as an apprentice at the Boston Mfg. Company, Waltham, Mass., 1891-94; rose to overseer of combing, 1896; was overseer of carding, Stark Mills, Manchester, N. H., 1896-98; superintendent, Aiken Mfg. Company, Bath, S. C., 1898-1900.. He has been at Lindale since 1900 as agent; the first 26 years the plant was the Massachusetts Cotton Mills, being acquired by the Pepperell Mfg. Company in 1926.

Tests Being Run at Georgia Tech on Treated Rabbit Fur

Tests are being run at the present, at the textile school of the Georgia School of Technology, Atlanta, Ga., which should be of particular interest to the manufacturers in the textile industry, on several phases of manufacturing yarns and cloths from treated rabbit fur. These tests include spinning, to ascertain the best conditions under which to run it, its finished strength, the twist multiple, etc.; and some of the fur, blended with other fibers such has rayon or cotton, is being woven. Another interesting feature of the experiments is the insulation test of blended rabbit fur fabrics as compared with the regular fabrics of all cotton content. Loss in waste percentage will be determined for each process the fur passes through. Other experiments that will be made throughout the summer will be to determine the possibility of using the yarn containing the rabbit fur in knitting machines, and to determine the practicability of using bleached rabbit fur in all processes.

The treated rabbit fur is said not to be affected by static electricity in the manufacturing process, a condition that has been a bane to mills attempting to run untreated rabbit. The rabbit may be run on regular cotton mill machinery by changing a few settings.

CURRENT TEXTILE TOPICS ....

Talk of the Month

IT USED TO BE that the physician prescribed medicine for sickness. But the political physician does not see it that way; at any rate, those who have been behind the recent move for drastic regulation of industry would prescribe a dose of medicine for an economic branch which has shown itself to be decidedly well. The patient was sick in 1933. He got a dose of medicine at that time, in the NRA. In fact it was an overdose—yet on the whole the patient benefited.

Industry in healthy progress as government meddles with it

In the recent period of lull, the cotton industry has perhaps more than any other branch of industry demonstrated the healthy conditions created by government intervention in 1933. For it will be granted anywhere that such intervention was a step toward progress. The leaders of the cotton industry itself had long years before said that its own conditions were impossible of permanence and that the unsound practices of a greedy minority would inevitably bring political coercion for betterment. So it happened!

Now as to the present. The industry through the last half of 1936 and the first quarter of 1937 partook of the fruits of a mushroom growth in business. Everybody wanted goods when nobody had stocks of any volume. But of course after 9 or 10 months of rapidly increased production there were stocks and meantime prices had been hoisted to premium levels, with consequent stifling of purchases in primary or wholesale markets, as well as creation of fears at least that consumers would resist the new prices.

Corrective Period to Continue

This condition, however, is no more than the time-worn procedure of an interim corrective period in a broad recovery that on precedent should continue for several years yet. The difference in the cotton industry is that a time of lull was customarily productive of a wave of cut-throat competition for business, whereas in the second quarter of 1937 no such uneconomic development ensued in a period of very small selling that was the aftermath of the boomlet since last summer.

How explain this difference? Well, in the first place the previous heavy buying had created a backlog of unusual volume, leading to record consumption of cotton as the industry ran at capacity. The unfilled orders at the end of March were sufficient to keep mills going about at capacity for many months without additional business of consequence for many weeks. Over and above orders, however, was the sound operating policy of the industry at large, and in all sections of the country.

Undoubtedly one reason for the extraordinary forward buying of cotton goods was realization of consumers that the industry is well regulated today. For that reason it is necessary for buyers to cover reasonably ahead on requirements. The recent move of the carded-yarn division aimed toward 100 per cent regulation (with only a small minority needed to be brought in) was a mere emphasis of the fact that the cotton industry is operating on a sound basis under voluntary control.

Thus manufacturers came into the second half of the year in healthy frame of mind so far as their market situation was concerned. The coming months will be the criterion of whether recovery will follow the normal pattern and run for 2 or 3 years more without serious setback. Complications of unprecedented nature have arisen, however, in the labor developments and the proposed legislation for political control of industry.

"Double-Jointed Program"—Marchant

Administration officials have shown a peculiarly paradoxical attitude toward industry. As stated by T. M. Marchant, in a discussion of the conditions, the government's attempt to keep down living costs of the individual and at the same time increase wages and cut hours of the textile workers is a "double-jointed program" which "cannot be put into practice without seriously hurting the textile industry, resulting in diminishing or perhaps vanishing margins and thousands of people thrown out of employment".

As we said above, the reaction in the spring was a normal corrective development, but the disturbing, if not to say revolutionary, actions of the CIO brought us into the summer with general misgivings in industry toward normal resumption of the upward trend. Silent endorsement of extreme methods of the CIO by the President and sponsorship of measures which would make industrial management a nominal element in governmentally controlled industry created conditions fundamentally upsetting to business.

Whether seriously or otherwise, Senator Black in June made a very practical suggestion, viz., that the textile industry attempt to write a substitute bill for the wages and hours law. With all its faults, textile management has somehow developed a great industry. It has granted the advisability of political regulation that would stop abuses of labor and unrestricted machinery operation. Why the brains of practical industry should be wholly disregarded in favor of purely economic theorists in drafting political control measures is a mystery.

Meantime, in view of the political developments, sellers as well as buyers were reluctant toward making distant commitments through the late spring and

early summer. For one thing, buyers in the quiet market were bidding low prices and all the developments pointed to higher costs for the future in mill production. Even without further appreciation of labor costs, low prices bid for cloths were unacceptable, since mills had established in the spring the best conditions ever known for textile workers.

Among the interesting speculations regarding the spring recession in demand was that change of spending habits of American consumers might be cutting into textiles. Some in the trade were said to feel that consumers are diverting more of their income to recreation and entertainment purposes. On the other hand, these pursuits themselves involve new demands for textiles and some textile mills have been quick to sense the change, adapting their output to the need.

New England Mill Situation

DESULTORY TRADING marked the second quarter of the year for cotton mills of New England, especially the predominant branch of fine goods producers. June brought spasmodic indications from the primary goods market that the lethargy of many weeks was passing, but no consistent buying was noticeable. The uncertainty created by labor troubles, specula- The uncertainty created by labor troubles, speculation as to whether consumers were resisting higher prices and the unsettled position of raw cotton were among elements of a temporary disturbing nature.

Under these conditions, a wholesome policy of retrenchment in mill operations was reported among the fine goods producers. The Berkshire Fine Spinning Associates set the pace in curtailment by closing 4 of its Fall River units the latter part of May and suspending operations in other factories thereafter. With deliveries completing orders in other units by the middle of June, other companies were resorting either to shutdowns or to lessening of the hour schedules of mills.

Berkshire Leads in Curtailment

So far as may be judged, the curtailment of production has been orderly and sound, a normal reaction from the extraordinary mill operations through the fall and spring. The action of the Berkshire group, a leading factor in cotton fine goods, has been more drastic than in other units. The contrast of spring quiet in goods trading after an extraordinary movement for many months, however, was marked and reduction of operations was inevitable for "marginal" units if not for others.

Fine goods mills led in the movement for stabilizing prices in cotton lines as the slow trading period was extended and buyers began pressing for concessions in price. The price situation was complicated, however, as raw cotton finally broke sharply through slow demand and favorable prospects for the new crop. There was also the temporary pressure on goods as sellers waited for indications of consumer buying in accumulated finished goods. All these obscured for the time being such factors as maintained high costs of production and fears of new control measures enhancing such costs.

Statistics on the forwardings of cotton to mills North right up to the current month, meantime, were significant of the relatively active position of the mills through the period of slow demand. Some slackening of the takings in cotton naturally was observed, but well through June they held far above those a year earlier. It was felt that the distribution of seasonal finished goods would bring a renewal of active buying this month, though mill men were feeling more conservative toward the outlook after the long movement of exceptional activity the past year.

Bill for Broad Control of Industry Supersedes Ellenbogen's

Obviously the mills in this section as elsewhere have been concerned with proposed industrial legislation and with the labor drive on the textile industry. Opposition was strong to the proposed Ellenbogen bill, proposed by Congressman Connery of Massachusetts and Senator Black of Alabama. The sidetracking of special textile control legislation was only for the purpose of advancing the broader wages and hours control for all industry and this also was strongly opposed as an impractical idea making the NRA pale into insignificance, though mill men apparently would not object to reasonable action on minimum hours and wages, as well as child labor.

CIO Accomplishes Little in New England

Through the month of June and previously, the efforts of the CIO in New England achieved no conspicuous results. It is more than 3 months since word was given that plans were nearly completed for a drive to completely unionize the textile plants of this district. Ample funds were understood to be available by the CIO leaders. If the funds have been spent, and a substantial amount undoubtedly has been used, the value returned appears hardly to have been commensurate.

Mills all along have been watching the situation closely, not without some apprehension in view of the successes which the CIO attained through the spring in other industries. They also have not overlooked the lawlessness which turned public sentiment against the campaign of the Lewis group. Mill workers themselves in this district in years past have seen enough of trouble-making agitators from outside trying to dominate the textile industry and in recent years have turned a deaf ear to their efforts. If the Lewis group gains its textile objective now, it will be a surprise.

Among the recent changes here is the discontinuance by the J. R. Montgomery Company, Windsor Locks, Conn., of its cotton manufacturing operations. Southern competition is cited as the reason. The Adams Manufacturing Company, of Shelton, Conn., recently closed for reorganization. It had gone through reorganization also in 1934. The business is 110 years old.

Suncook Mills, of Suncook, N. H., sold 97 parcels of real estate and will use the proceeds to finance the purchase of 500 new looms. The company is discontinuing production of sales yarns and concentrating on cloths long holding a market reputation.

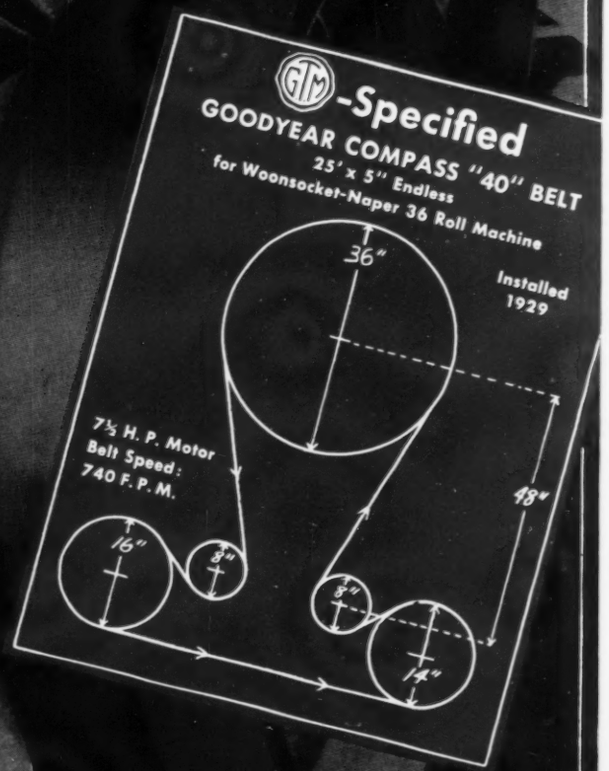
HERE'S A BELT RECORD FOR YOU!

PREVIOUS TO 1929 a large Alabama cotton mill used the highest quality "double" belts on their Woonsocket-Naper 36 Roll Machine which operates 24 hours a day, 5 days a week. High humidity, excessive lint and a heavy load made it necessary to cut the belt on an average of every *six weeks* to take out slack, and even then it was difficult to maintain uniform tension. *Maximum belt life was 2½ years.*

IN THAT YEAR THE G. T. M.—Goodyear Technical Man—was asked to make an analysis of this drive and on his recommendation a Goodyear COMPASS "40" Belt, 25' x 5" endless, was applied.

FOR MORE THAN 7 YEARS, *until December 1936, the Goodyear COMPASS pulled this drive without a single repair, save a few minor adjustments shortly after application, and without a penny's maintenance expense. And it is the only belt ever used that starts this machine under full load—all others jumped or slipped off the pulleys!*

DID COMPASS COST MORE? No indeed, it cost approximately 28% *less* than previous belts, yet lasted over *three times longer!* Do savings like this interest you? The G.T.M. can show you similar economy on any textile drive. To consult him write Goodyear, Akron, Ohio, or Los Angeles, California—or the nearest Goodyear Mechanical Rubber Goods Distributor.



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MOLDED GOODS
HOSE
PACKING
Made by the makers of Goodyear Tires

THERE'S A GOODYEAR BATTERY NOW!

THE GREATEST NAME IN RUBBER

GOODYEAR

"THE SITUATION"—as Seen Across an Executive's Desk

June 21, 1937.

BEFORE we can get one of these resumes of the situation written, edited and printed the picture changes completely and we have to start all over again. Last month the Ellenbogen Bill was the bugabear. It has been thrown out of the window and onto the garbage heap and this month the Black-Connery Bill is being dissected at congressional hearings as this is being written. Because the hearings are not yet over, and because until they are it will be a foolish waste of time and space to offer a summation of the proposed legislation I shall only touch upon a few points concerning the hearing itself.

Murchison's 5-Point Program

It was noted that of all the Big Business men who testified before the committee, Dr. Claudius T. Murchison was the only one who offered constructive criticism. All the others were like the old blood and thunder parson who said "whatever 'tis I'm agin it." But not "Murch"! He admitted that Federal legislation which will insure to employees a proper return for their labor and that will protect employers from the competition of under-paid labor was desirable for the survival of an industrial profit era. He did more, for he presented a 5-plank program:

(1) Elimination of child labor.

(2) Prohibition of employment of women and minors between the hours of midnight and 6 A. M.

(3) Establishment of a 40-hour work week with tolerances to meet seasonal demands.

(4) Adoption of a basic minimum wage with no deviation other than those justifying a broad regional differential.

(5) Administration of such a program by an existing agency of Government.

By doing this he jockeyed the cotton textile industry into the enviable position of being able to help formulate any legislation that may be adopted for general industry and the cotton industry in particular. This job proves that Dr. Murchison is a master strategist and I am glad that he is slipping our craft into port.

Another point of interest which developed in the hearing is the unexpected position taken on the measure by Sidney Hillman. Since the proposed measure actually does the job the CIO expected to do, and wanted to do, students of the situation expected Hillman to oppose it. Amazingly, he came out endorsing the measure, which was in direct reversal of his form during the Ellenbogen hearings when, instead of appearing before the committee, he sent word that he was sorry but he had not read the bill.

At the Black-Connery hearing he was particularly vociferous in favor of Section 5 which gives the Administrative Board the right to vary hours and wages around the basic standards set by Congress. He insisted that this section be retained in the bill, saying that without it the bill would be emasculated.

Whatever develops from the Black-Connery legislation the industry at large may be prepared for one thing: a higher cost system in their manufacturing set-up.

In the midst of the hearings on the legislation, Representative Connery, labor advocate and joint author of the measure died from food poisoning.

And while the legislative situation is still stewing in its own juice we can take a hasty look around and see what is actually taking place in the industry itself, in the good ole summertime . . .

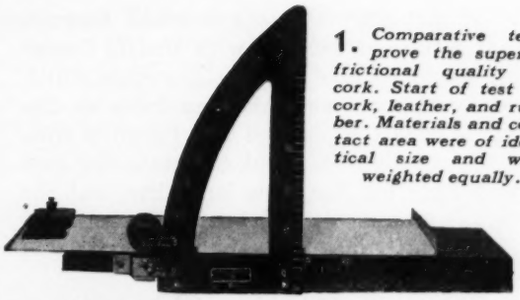
Are We Being Foolish?

In the hysteria of actually operating our plants during the last 6 months of 1936 we forgot what seasons were for. We forgot that it is an abnormal situation when we do not have a summer slump. We forgot everything but the fact that orders were pouring in, times were getting better and we were making money again. Now here in 1937 we must remember that the summer lull is upon us, it is a normal seasonal development but that through our own bullheadedness we are making even the lull an abnormal one. We have the usual seasonal slow-up but more than that, we face the possibility of a permanent one for in the past 12 months we have produced goods in the same spirit as drunken sailors on a spending jag with no thought of tomorrow's headache. Of course, friend, your head may not be aching *yet* but mine is hurting mighty bad right now, and I wish I had not played yesterday's fool.

We have delivered all our orders based on the low price times, and we would like mighty well to deliver some of the millions of pounds of orders on our books based on high priced cotton, but strange (?) to say the customers are not taking any. They are distributing their own inventories and waiting for prices to drop to such a point that they can advantageously restock their warehouses with low priced business and get quick deliveries on that. Our books will continue to carry our old high priced orders when we are busy running on new low priced ones. The cotton textile industry is the only manufacturing industry in the world which does its business on an option basis and we are fools to let it be conducted in such a manner. We should sell our goods—not accept an order and then sit on our cushions and wait for the specifications to come in, at the whim of the buyer as the market fluctuates in his favor.

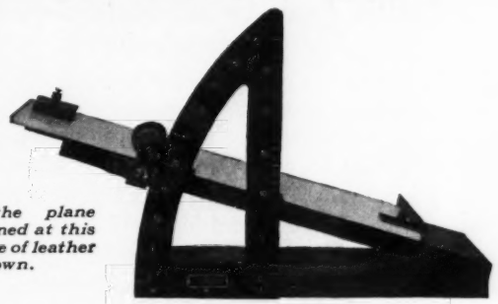
Talk about horse and buggy days—the way we do business belongs in the carriage era. We should streamline it and give ourselves the benefit of airflow methods.

In an effort to stay the avalanche of price cutting due to surplus stocks accumulating, several curtailment programs are under way by some groups which vary in plan from curtailment of one day per week throughout the summer to one full week each month beginning in July. It is figured that in one small yarn group alone such a program will remove from the market 5 million pounds of stock per week of cur-

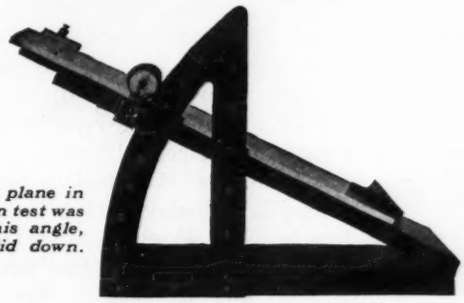


1. *Comparative tests prove the superior frictional quality of cork. Start of test on cork, leather, and rubber. Materials and contact area were of identical size and were weighted equally.*

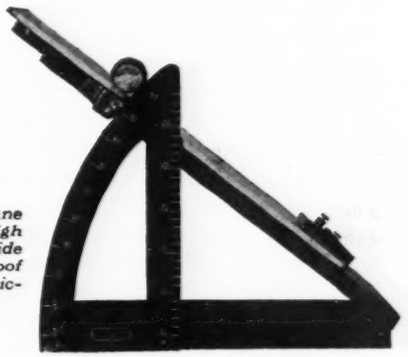
How the HIGH FRICTIONAL PROPERTY OF CORK *aids mill owners!*



2. *When the plane was inclined at this angle the piece of leather slid down.*



3. *When the plane in the friction test was inclined at this angle, the rubber slid down.*



4. *Not until the plane reached this high angle did the cork slide down. Convincing proof of cork's superior frictional properties!*

GREATER than the frictional coefficient of other materials is that of cork! And both in its natural state and in composition form, cork retains this valuable property—and is less affected by water, oil, or grease.

Translated into mill terms, this high frictional quality of cork means four important advantages. It produces more uniform drafting with a minimum of slippage. Its better grip drafts out bulky roving that other materials will not handle. Its greater pulling qualities also minimize the effect of hard ends. And when used on drawing and roving frames, cork delivers a more uniform product to the spinning room.

Nor do the valuable benefits of cork to the textile industry stop there! Due to its unique cell structure which consists of millions of microscopic cells of entrapped air, cork also offers high resistance to lateral flow, great durability, resilience, and resistance to liquid penetration. Together with cork's high coefficient of friction, these exceptional qualities provide a roll covering material that gives longer wear . . . requires fewer roll changes . . . spins stronger, more uniform yarn . . . and, saves 50% or more on roll covering costs!

Since Armstrong introduced the first cork roll covering more than twenty years ago, many improvements have been made in it. Today, Armstrong's *Extra Cushion* Seamless Cork Cots set new standards in roll covering efficiency and economy. For complete information, prices, and samples of Armstrong's Extra Cushion Cots, write to Armstrong Cork Products Co., Textile Div., 923 Arch Street, Lancaster, Pa.

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ARMSTRONG'S EXTRA CUSHION SEAMLESS CORK COTS

ARMSTRONG HAS MADE CORK PRODUCTS SINCE 1860

tailment, and keep its position well balanced. It is indeed a wise manufacturing group which heeds its "vital" statistics.

The Wagner Act which was so recently upheld by the Supreme Court cited its first southern case in that of NLRB versus Mooresville Cotton Mills. This decision is so important that it should be studied in detail.

The National Labor Relations Board issued an order, June 11th, requiring the Mooresville Cotton Mills of Mooresville, N. C., to cease and desist from discouraging membership in local 1221, United Textile Workers of America, and from in any manner interfering with the exercise of its employees' rights to self-organization.

The ruling called upon the company to offer reinstatement to 8 workers whose union activity moved the company to refuse them re-employment after a strike in September, 1935. The board holds that the 8 workers have not lost their status as employees, and the company is accordingly ordered to make good their loss in wages, minus any amounts earned by them during the period since the strike.

This is a fair example of what all mills will have to face under the Wagner Bill. It is well for both the managing executive and the operating executive to realize that and to be on the alert for any similar threat which may bring trouble down on their heads.

Although TWOC claims that today they have over 100,000 members in the southern textile plants, it is interesting to note that some textile sections are opposed to joining the CIO. As a result of the CIO organization program some of the textile operator leaders have started backfire organizations in order to keep the union dues at home, to choose local benefits instead of TWOC's broad industry-wide program. One good example of this work is the Golden Rule Association, Inc., to which was issued a state charter, established at the Firestone Cotton Mills, Gastonia, N. C.

It will be recalled that this plant is the old Loray Plant, scene of the famous 1929 strike, and a victim of the 1934 strike also. The local union mentioned above was organized by men who have long been employees in this plant, and who suffered drastically under the other two strikes. They are opposed to organization by outsiders, and with their organization as a unit nucleus they expect to begin a drive to organize other county mills under separate and individual charters of the Golden Rule. This voluntary action on the part of the workers is apt to interfere seriously with the entire southern CIO activities.

Another important development which has come about affecting our industry is the revision of freight rates effective June 8th. This change in rates created a new situation for every buyer of cotton goods, and every seller or manufacturer of cotton goods, and threw into chaos some of the old tried and true schedules. Although the Interstate Commerce Commission refused to interfere with the new rate structure for southern textile products, it agreed to re-open the case for further hearings at a date to be announced later. The new schedule amounts, roughly, to a 20 per cent increase on products from Georgia and Alabama. Almost instantly it was announced through the press that a fund of $50,000, with Donald Comer as treasurer, would be used to fight the rates which were labeled by Georgia and Alabama mills as discriminatory. It is safe to assume that Carolina mills will put up an equally stiff fight to retain the new rates for they have felt for some long time that the old schedule was unfair to them, in competitive shipments of Georgia and Alabama to the middle west and the Chicago market.

With all these problems looking at us, we do not find any lull in the executive end of the game, and our fishing rod is getting cobwebby standing in the corner.

Beattie Again Heads South Carolina Cotton Manufacturers

S. M. BEATTIE, president of Piedmont (S. C.) Mfg. Company and the Woodside Cotton Mills Co., Greenville, S. C., was re-elected as president of the Cotton Manufacturers Association of South Carolina at the annual meeting of the organization held at High Hampton, N. C., on June 4-5. A. F. McKissick, president of Alice Mfg. Company, Easley, S. C., was renamed as vice-president; and William P. Jacobs, of Clinton, S. C., was again elected as secretary-treasurer.

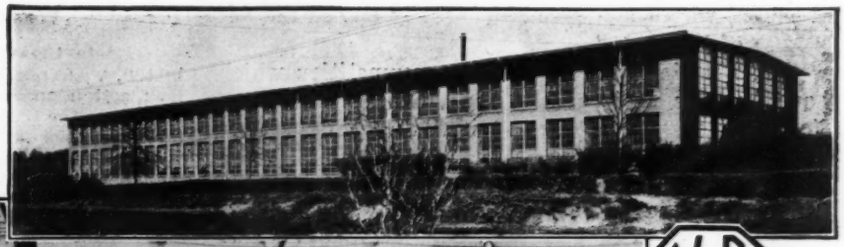
Except for the prepared address of the president, the convention consisted mainly of informal discussion of current problems of the association members, and an extensive list of reports from the organization's many active committees.

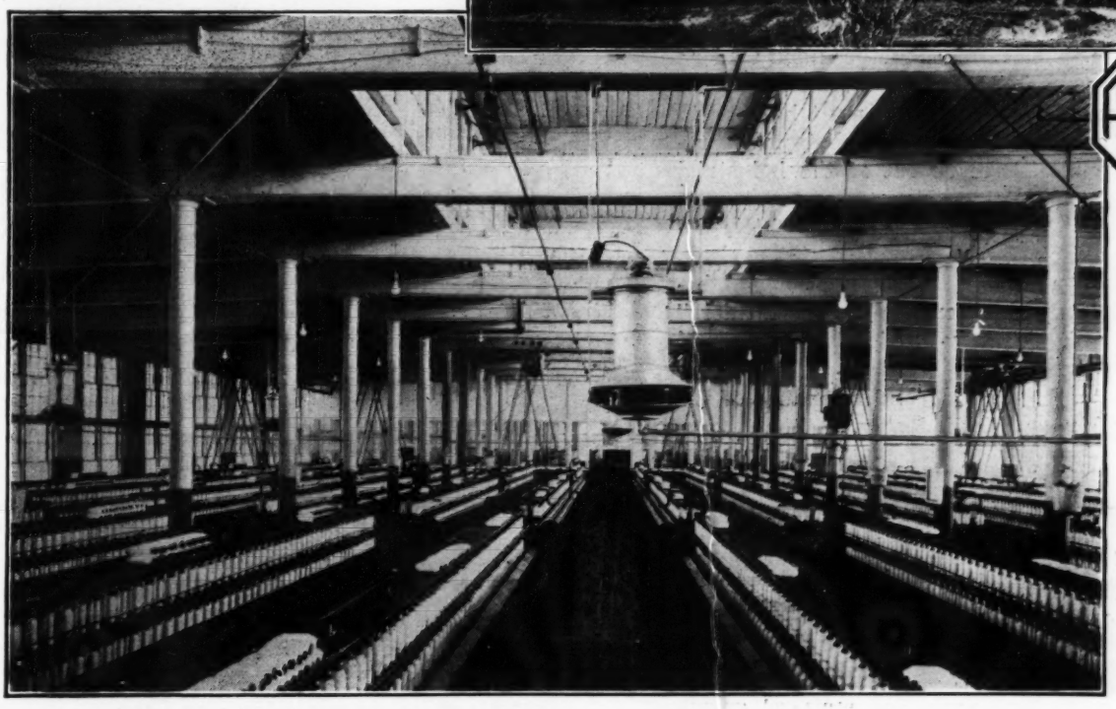
In his address, Mr. Beattie reviewed the history of the textile industry, citing the decrease in active spindles in New England, and the increase in the South. He showed that the past ten years have shown a decided decrease in New England spindles, while the South has about held its own, with a slight decrease for the country as a whole from the high point of 18,585,000 spindles in 1930. During the same time, however, he showed, the industry in South America and the Orient has grown by leaps and bounds. "For instance, active spindles in Japan have increased from 1,274,000 in 1900 to 11,068,000 in 1936; in China from 550,000 in 1900 to 5,010,000 in 1936; in India from 4,945,000 in 1900 to 9,705,000 in 1936; in Brazil from 1,200,000 in 1913 to 2,712,000."

Showing the trend from England to New England, and then to the South, Mr. Beattie said southern textile workers are now competing for their jobs with textile workers of other countries, and "unless we southern people rally to their defense by perpetuating and safeguarding the industry for the South, our own workers are fighting a losing battle." This, he said, is "a problem not merely for industry, but a problem specifically for its workers; and more than that, it is a serious problem for our farmers as well, for the American mills are the farmers' best customers." He urged more active attention to the matter of excessive taxation, citing this as one reason for the loss of the industry to New England, calling attention to the fact that now, "in the matter of property taxes, the tax rate paid per spindle in South Carolina today is one of the highest in America. * * * It has now reached

AMERICAN YARN & PROCESSING CO.
MT. HOLLY, N. C.

This company has used Truscon protection as follows: *Wall-Lite* (industrial enamel for interiors of mill buildings); *Truscon Waterproof House Paint* (for company houses); *Lumetex* (aluminum coating for plant); *Agatex* (for plant); *Waterproof Varnish, Finest* (for both plant and company houses).





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THE TRUSCON LABORATORIES
DETROIT • MICHIGAN

SOUTHERN BRANCHES { **CHARLOTTE, N. C., 910 JOHNSTON BUILDING**
ATLANTA, GA., 128 MARIETTA STREET

the point where the taxes paid usually exceed the net income of the mills."

Mr. Beattie touched on foreign competition which has taken our export markets and invaded the domestic markets. "Handkerchief manufacturers in our own back yards in the South—with plants built there purposely to use southern goods—actually find it advantageous to buy goods from other countries. * * * It looks like more than improved methods and modern machinery will be needed to hold the American market for American mills. Something must be done to stem this tide, or else our national policies with respect to industry will force us out of the industrial field."

Following this "gloomy picture", Mr. Beattie declared there are some favorable factors on the horizon. He declared that "a close, friendly relationship between the textile workers, executives and stockholders" in the South is a distinct asset which he hoped "will produce the solution of our industrial problems." He commented also on the growing understanding of the public of the problems of the industry.

COMMENT ON THE COTTON MARKET

New Orleans, June 14, 1937.

THE TREND of the cotton market continued downward during the past month, due largely to the absence of demand of consequence for raw cotton in the South, inactivity of the goods markets, July liquidation and more favorable weather in the cotton region. There was less moisture in the eastern belt, and beneficial rains in the western belt, with temperatures more seasonable, which permitted favorable progress of farm work, and promoted growth of the plant. Other depressing influences were the labor troubles in this country, the political situation abroad, and uncertainty as to the future status of gold.

Domestic consumption of raw cotton continued comparatively large compared with last season, census returns for May showing much larger than for the corresponding month of last season, and consumption of all kinds by the world was reported as heavy. These features were apparently ignored, more attention being directed to improving weather and crop accounts and the lack of an urgent demand for the staple and for the finished product.

CENSUS REPORT

United States—Bales—	This season	Last season
Consumption of lint during May	669,000	531,000
Consumption of lint 10 months	6,680,000	5,189,000
Mill stocks, May 31	1,815,000	1,090,000
Stocks in public storage and warehouses, May 31	3,588,000	5,239,000
Stocks in mills, public storage and warehouses, May 31	5 403,000	6,329 000
Active spindles during May	24,659,000	22.833,000
Active spindles during April	24,723,000	23,119,000
Consumption of lint in Cotton Growing States, May	559,000	448,000
In New England States	90,000	67,000
In all other states	20,000	16.000
In the United States	669,000	531,000
Consumption of lint in Cotton Growing States, 10 months	5,569,000	4,360,000
In New England States	897,000	679,000
In all other states	214.000	150 000
In the United States	6,680,000	5,189,000

AMERICAN COTTON

August 1 to June 11—Bales—	This season	Last season
Brought into sight (marketed)	13,732 000	12,742,000
Exports from the United States, incl. Canada	5 453,000	5,862,000
Spinners takings, world	13,328,000	11,841,000
Stock at all U. S. ports, June 11	1,288,000	1,545,000

WORLD'S VISIBLE SUPPLY OF COTTON

June 11—Bales—	This year	Last year
American	3,820 000	4,405,000
Other kinds	2,102,000	1,948,000
All kinds	5,922,000	6,353,000

World's Consumption and Production of Cotton

Recently the Garside Service estimated the world's consumption of all kinds of cotton for this season at 30,250,000 bales, and the world's production at about 29,900,000 bales.

World's Carry-Over of American

Of late the Bureau of Agricultural Economics, Washington, was credited with predicting world's stock of American cotton on August 1st would be about 1,000,000 bales less than the carry-over at the start of this season when it was 6,955,000 bales. The declines in American cotton prices in recent weeks from the March "peak" was said by the Bureau to have placed it in a more favorable price position with competitive foreign growths used by foreign spinners.

The Demand for American Cotton May Improve

Since it is probable that the further important decline in the value of American cotton has placed it in a more attractive position in the eyes of foreign spinners, it is possible that the demand for American may improve, but in some quarters it is said there is an indisposition of merchants and spinners at home and abroad to contract far ahead until the future of gold becomes assured, and domestic labor and international political conditions become settled. Meanwhile there is much room for improvement in the demand for raw cotton in the South, as sales of late, from day to day, have been comparatively light. Owing to the prospective smaller carry-over, and uncertainty of the growing crop, as well as the lower price, any development of a bullish nature, would likely cause a revival in the demand.

Loan Releases

The Commodity Credit Corporation reported recently release of loan cotton last week amounted to only 4,039 bales as compared with 11,433 bales the previous week. The grand total of sales for the season thus far amounted to 1,330,908 bales. The corporation announced that the average price for releases has been 13.50 cents. The corporation declared that the amount of cotton released in the last few weeks indicates that the demand has been satisfied and that no concessions will be made in the loan price between June 25 and January 1.

Progress of the American Growing Crop

More favorable crop weather prevailed in practically all sections of the cotton region during the past month. Periods of dry and warmer weather prevailed in the eastern half of the belt, while needed more moisture was provided for west of the Mississippi river, which is reflected in more promising crop accounts from nearly all districts in the interior. Substance of Washington's crop summary for week ended June 8—"In the cotton belt the week was warmer than normal in the eastern and central portions, and somewhat cooler than normal in the west. Rainfall in most generous amounts covered nearly the entire cotton belt. These conditions made a generally favorable week. Because of the mild winter in the eastern cotton belt, there are some reports of heavy weevil emergence."

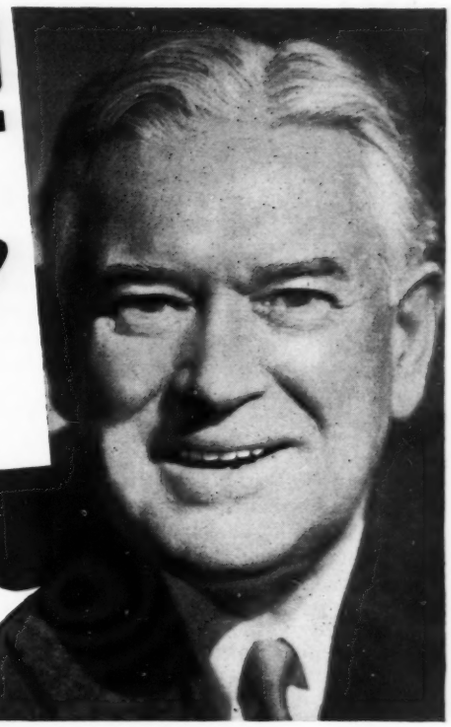
Recently a private bureau estimated this year's acreage increase at 14.4 per cent, indicating a planted average of 35,333,000 acres. Unofficial predictions of acreage increase so far this month, range from about 10.4 to 14.4 per cent, indicating a planted acreage of between 34,143,000 and 35,474,000 acres. The acreage in cultivation on July 1 last year was 30,960,000 acres. The government's acreage estimate will be issued on July 8th.

TOTAL AVERAGE RAINFALL IN TEXAS, IN INCHES

Year—	1937	1936	1935	Normal
For May	2.23	6.56	7.20	3.64
From Nov. 1 to May 31	12.11	15.79	21.10	16.63

The Summit (Miss.) Textile Corporation has cleared through the Corporation & Securities Commission, 100,000 shares of non-par value common stock, 50,000 Class A non-par value, and 50,000 Class B, also non-par value. Both classes of stock participate equally in assets and dividends, and share and share alike. The Class B non-par value stock is to be exchanged for stock held by the present stockholders. 25,000 shares of Class A stock have been sold through an investment house and the balance of 25,000 is to be held in the treasury for future financing if and when necessary. The Class B stock is voting stock and has the right to participate in the management and affairs of the corporation.

WIN $100.00 in cash!



WE'LL PAY YOU $100.00 IN CASH FOR THE BEST NAME FOR MOREHEAD'S OUT-STANDING NEW UNIT

IT'S EASY . . NOTHING TO BUY . . NO PUZZLES TO SOLVE

At last, a contest that's absolutely FREE! No merchandise to buy . . . no labels to send in . . . no puzzles to solve . . . no wrappers to collect. All you have to do is send in the coupon below. By return mail you'll get an OFFICIAL ENTRY BLANK and helpful hints for picking a name FREE!

On the official entry blank, write the name you select—explain it in as few words as possible (not more than fifty)—mail it to the Morehead Manufacturing Company, Detroit, Michigan—and you're in line for the $100.00 CASH PRIZE! That certainly is easy, isn't it?

What Is Morehead Model "X" ?

Morehead's new unit is a revolutionary development backed by more than forty years of service in this field. The result of all our experience in steam drainage and boiler feeding has been built into this new unit to assure thrifty, carefree, efficient service. You'll be amazed at the simple design, rugged construction, and many exclusive features of this unit that make for completely dependable operation.

Send for "Dope Sheet" and Official Entry Blank *Today!*

This chance to win $100.00 is too good to miss! Fill out the coupon below and mail it NOW! You'll get an OFFICIAL ENTRY BLANK and valuable hints on how to pick a prize-winning name. Send for it without delay.

Read These Few Simple Rules

1. Anyone is eligible to enter this contest except employees of the Morehead Manufacturing Company, their advertising agents and their families.
2. Entries will be judged for advertising value, descriptiveness and clarity of explanation.
3. Contest closes at midnight, August 31, 1937. (Send your entry as soon as possible to facilitate early judging—less delay in awarding the prize.) The decision of the judges shall be final.
4. In the event of a tie, duplicate prizes will be awarded to each person proposing the prize-winning name accompanied by an explanation, which the judges select.
5. All entries become the property of the Morehead Manufacturing Company. None will be returned. The sponsor reserves the right to use or not use any entry whether it is a prize-winner or not. Winner will be notified as soon as possible after the contest closes.

JUDGES: M. S. Kice, Chief Engineer, American Blower Corporation. C. W. Brooke, Graduate Engineer, Prominent Advertising Executive. A. Fitzgerald, Pres., Morehead Manufacturing Co.

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MOREHEAD MANUFACTURING COMPANY
DETROIT MICHIGAN

MOREHEAD MANUFACTURING CO.,
Dept. C Detroit, Michigan

Send me FREE official entry blank and valuable hints for selecting a prize-winning name.

Name_____

Address_____

Company_____

City_____ State_____

WHAT THE SOUTHERN MILLS ARE DOING

UNION BLEACHERY, Greenville, S. C., is constructing a 10-family apartment house which will cost about $35,000. The building, which is to relieve the housing congestion, will be two stories and will be located near the school building.

Santee Mill, Orangeburg, S. C., has inaugurated a program of modernization that will take 8 or 10 months to complete. This will include the installation of new and modern machinery, increasing the production of the plant. Later, if business conditions warrant, the Bamberg (S. C.) Orangeburg unit.

Marshall Field & Company will soon have new residences for its workers. A housing corporation has been formed to build homes at Leaksville, Draper, and Spray, N. C. As the mills are being enlarged, the present housing facilities are not adequate.

Shuford Mill Company, Hickory, N. C., will replace its old spinning equipment with 24 new frames.

Granite Falls (N. C.) Manufacturing Company is rearranging the various departments and second hand machinery is being installed.

Robinson Yarn Mills, Dallas, N. C., are installing 3,000 additional spindles; the Walker Engineering Company is doing the work.

Gaffney (S. C.) Manufacturing Company has made plans for modernizing its plant and balancing its equipment. New machinery will include 25,000 Saco-Lowell roller bearing spindles, 65 additional cards, 18 Whitin 8x4 speeders, and an additional warper. Pick clocks will be placed on all of the looms, and automatic cleaners will be installed in the spinning rooms.

Ninety-Six (S. C.) Cotton Mills are overhauling the machinery.

Calhoun Mills, Calhoun Falls, S. C., are undergoing an improvement program of $22,000. J. E. Sirrine & Company, Greenville, S. C., are the engineers.

Glen Raven (N. C.) Cotton Mills plan the erection of an addition to the present plant.

Central Falls (N. C.) Manufacturing Company has completed an addition to the rayon weaving plant and additional looms are being installed.

Graniteville (S. C.) Manufacturing Company has installed 50 loom motors.

Jackson Mills, Plant No. 3, High Shoals, N. C., has finished a new 500 hp. hydro-electric plant. New air filters and exhaust systems have been installed by The Textile Shop, Spartanburg, S. C.

Southern Mercerizing Company, Tryon, N. C., is planning to construct a building at the site of the present plant.

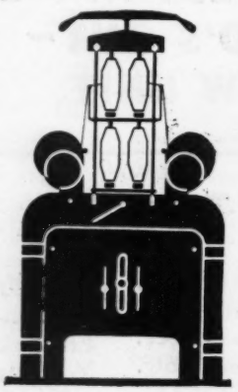
Sanford (N. C.) Cotton Mills will undergo an expansion program which will include an additional story to the recently built annex, which will give more space for 3,000 additional spindles.

The Vance Thread Corporation, Salisbury, N. C., has established a small plant at Hendersonville, N. C.

Victor-Monaghan Company is repairing and re-painting 1,200 company houses and 5 plants. Those plants undergoing repair work or having work done in the village are located at Greer, Victor, Walhalla, and Apalache.

It is understood that the Valdese (N. C.) Manufacturing Company will spend $60,000 this year modernizing the plant.

Clifton (S. C.) Manufacturing Company, Mill No. 1; Cherokee Spinning Company, Knoxville, Tenn.; Cliffside (N. C.) Mill; Laurens (S. C.) Cotton Mills; Mexia (Tex.) Textile Mills; The D. E. Converse (S. C.) Company; and Tallassee (Ala.) Mills; have all installed Seydel-Woolley Company twist setters.



Arnall Manufacturing Company, Elberton, Ga., is having the village homes repaired and repainted and water is being made available to each house.

Hanes Dye and Finishing Company, Winston-Salem, N. C., will erect an addition to its plant at a cost of about $6,000.

Robinson Yarn Mills, Dallas, N. C., are adding 3,000 spindles.

Clifton (S. C.) Manufacturing Company will make many improvements in the plant during the ensuing year.

Durham (N. C.) Manufacturing Company has installed automatic looms, replacing old equipment.

Riverside & Dan River Cotton Mills, Danville, Va., are building a 206 x 152-foot addition to the bleachery. This will be used for mercerizing.

Stonewall (Miss.) Cotton Mills, Inc., are undergoing a number of improvements at the plant.

Washington Manufacturing Company, Tennille, Ga., is building a one-story addition, 56x100 feet, which will house machinery. Total cost will be about $45,000.

Langley (S. C.) Plant of Aiken Mills, Inc., has begun a renovation program. This plant has not operated for more than two years.

Oakland Plant of The Kendall Company, Newberry, S. C., will build granite walls between some of the houses in the village to prevent erosion. General repairs will also be made.

Dwight Manufacturing Company, Alabama City, Ala., has installed new mercury vapor lamps in the slashing department of the plant.

Mollohon Plant, The Kendall Company, Newberry, S. C., will start improvements on the plant costing around $60,000. Three large warehouses will be constructed and two large residences for overseers will be built.

Pepperell Manufacturing Company, Opelika, Ala., has installed several high-speed, automatically controlled slashers.

An Immortal Example of COLLECTIVE THINKING

The Constitution of the United States, drafted by a convention of 55 American colonists at Philadelphia in 1787 is one of the world's greatest examples of COLLECTIVE THINKING. Under its guidance the United States has grown from a group of 13 struggling colonies to one of the largest and most powerful nations in the world.

Collective thinking can also play an important part in textile sizing and finishing. In fact, new textile fibres, new fabrics and many new chemicals demand a knowledge and experience in those operations that is seldom given to one man or even to one organization. Furthermore, rapid style changes and consequent prompt delivery requirements necessitate speedy solution of all manufacturing problems.

Collective thinking for sizing and finishing purposes is available to even the smallest plant or department through A-H Consultation Service. This service is rendered free of charge by a staff of specially trained chemists assisted by a completely equipped, modern laboratory and a company experience of 122 years.

Write and tell us your problem or communicate with our nearest representative.

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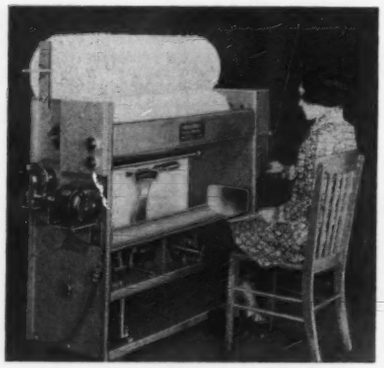
NEW TEXTILE EQUIPMENT—PUBLICATIONS

Saco-Lowell Lap Meter

Saco-Lowell Shops, 147 Milk St., Boston, Mass., has developed a new precision instrument for measuring picker laps and then weighing them. Also, when the lap is being unrolled it passes before a light and may be inspected. It is designed to divide the laps into uniform, regular, predetermined lengths and to weigh each length immediately on being detached. The machine is composed of 3 assemblies, the frame, the unrolling and measuring motion,



For lap weighing and measuring

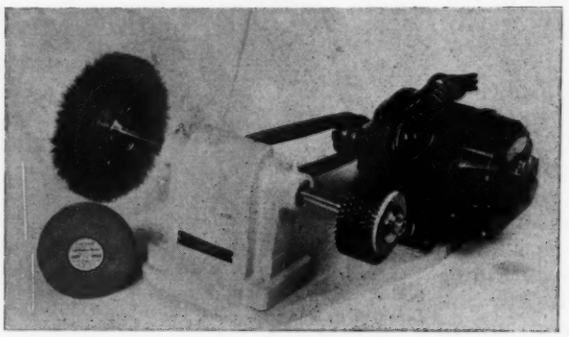
and the scale. The unrolling and measuring motion consists of a steel measuring cylinder and a pair of detaching rolls. There is a large gear on the end of the shaft which supports the measuring motion, and which carries a hunting tooth cog motion which stops the machine after the required length has been unrolled. Should it be found necessary to stop the lap for a protracted examination, this is possible. The scale is of the indicating type. In connection with the scale there is a special chart which has divisions identical to those on the scale and the operator can mark the weight by placing a pencil dot.

New Colors Announced in Folders

E. I. Du Pont de Nemours & Company, Inc., Wilmington, Del., has announced several new colors in the usual folders which may be kept in a looseleaf folder. Ponsol Brilliant Yellow 4G Double Paste (or Powder) is a vat color of a bright, greenish yellow shade. It is used principally for dyeing cotton and may also be applied to rayon when a bright, fast yellow is desired. It is not recommended for dyeing silk. Ponsol Yellow G Paste, Double Paste, and Double Powder, is an anthraquinone vat dye which produces rich, golden shades of yellow. As noted, it is available in 3 forms. It possesses excellent fastness characteristics toward practically all color-destroying agents, showing very good resistance to chlorine, perspiration, and washing. Ponsol Red Violet RRNX Paste, or Powder, is a vat color which produces very red shades of violet on cotton and rayon. It has excellent fastness to light, chlorine and washing at 120 degrees and 160 degrees F., even in light shades. Du Pont Neutral Brown 2RS is an acid color which yields bright, reddish brown shades on pure and tin-weighted silks. It is recommended for use in shading the silk in cotton-silk hosiery. Dyeing directions are given and color samples are attached to the folders.

New Reed Brushing Machine

Greensboro Loom Reed Company, Greensboro, N. C., has developed a small portable low-priced machine for cleaning and polishing reeds. A steel bristle brush removes the rust. A hair



Machine for brushing reeds

bristle brush of small diameter for brushing out lint and dirt and a Brightboy wheel for removing cuts, temple marks, etc., without leaving burrs on the edges of the dents are furnished. The machine weighs only 68 pounds and may be set up on a bench and plugged into a convenient light circuit. It is equipped with a ⅓ hp. motor, 110/220 volts, of 1725 r.p.m.

Ball Bearings Applied to Spinning Frames

The Fafnir Bearing Company, New Britain, Conn., in a new circular, describes the exclusive features of its spinning frame boxes, gained by the use of the wide inner ring ball bearing and self-locking collar. It is stated that faults of straight shaft applications which require sleeves, adapters, or adjustable devices, are eliminated in these units. Slippage is said to be impossible on the shaft and a positive drive is assured. These ball bearings are illustrated in a Fafnir publication.

Folder on Monel Pails

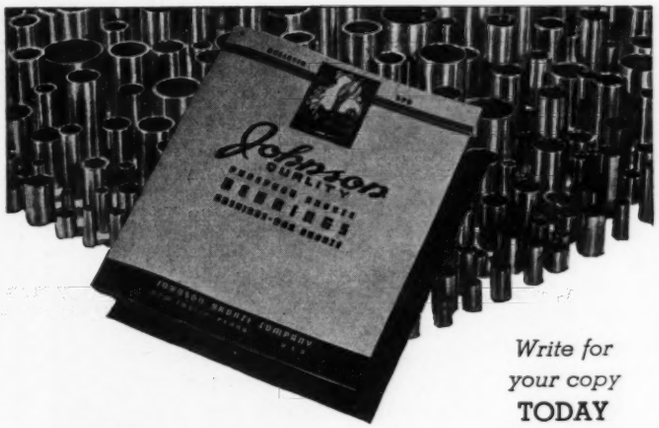
The International Nickel Company, Inc., 47 Wall St., New York City, has made available a folder illustrating its Monel pails for use in various departments of the plants. These pails are both plain and graduated and are available in stock sizes from 12 to 20 quarts, other sizes being made to order. It is said that Monel utensils are unaffected by most dyes, organic and mineral acids, salts, and finishing compounds used in textile plants.

Bulletin on Flow Meters

The Foxboro Company, Foxboro, Mass., has released a comprehensive 49-page bulletin on flow meters for steam, liquids, and gas. The publication is in 4 sections: 1. A broad survey of meter uses. 2. Description of flow meters including the universal type, pressure compensating type for measuring flows where the static pressure is variable, combination meter with separate static and reverse control, dual-flow meters, bell type meters for low pressures, wide range meters, high pressure meters, etc. 3. Specifications and construction details. 4. Charts, ranges, and paragraphs on primary devices, flanges, straightening vanes, pipe layouts, and meter mountings. The bulletin number is 200-2.

"The Story of Rayon"

The Viscose Company has revised its book, *The Story of Rayon*, and released the third edition which is a most comprehensive treatment of the subject of rayon and the history, discovery, and development of the fiber. The various processes by which rayon is made are described, as well as the differences between viscose rayon and cellulose acetate rayon. Particularly interesting and significant at this time is the inclusion of a chapter devoted to spun rayon. The book contains 85 photographs in its 95 pages, and is suitable for use as a text book on rayon in schools and department store training classes.



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New . . .

BULLETIN 370

A stock list of over 700 individual sizes of Johnson General Purpose Bearings—is yours for the asking.

Thirty-two pages of bearing information—listed progressively by size and numerically. Unit and quantity prices are included. This book also contains size listing on Johnson UNIVERSAL Bronze Bars, Johnson Graphited Bearings, Lead Base and Tin Base Babbitt. This is your guide to genuine Bearing performance.

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Why pay more than is necessary?

WHEN the cost of any operation in your mill is greater than is absolutely necessary, you are either making it difficult for your products to compete with those of other mills or you are weakening the financial possibilities of your firm.

If you are not *sure* that your bobbin cleaning and handling costs are at a minimum, it will pay you to let one of our engineers make a study of the job to be done in your plant and give you *figures* showing the approximate minimum cost.

The New TYPE K *Bobbin Stripper*

Our Type K Bobbin Stripper is the fastest, the most efficient machine ever perfected for cleaning filling bobbins, and its two accessories, the Bobbin Box Hoist and the Bobbin Conveyor, make it even more efficient.

The TERMACO *Roving Bobbin Cleaner*

The Termaco Roving Bobbin Cleaner is doing a real job for hundreds of owners. If your spinners are still cleaning yours by hand it will pay you to investigate the labor and waste savings it makes possible.

WRITE US NOW

Whatever your bobbin cleaning problem may be, we can work out a system whereby bobbin cleaning costs will amount to no more than is absolutely necessary.

See Also Textile World YEAR BOOK and CATALOG

the new TYPE K *Bobbin Stripper*

The Terrell Machine Co., Inc.

1200 North Church Street
CHARLOTTE, NORTH CAROLINA

MR. LUTHER PILLING, Danielson, Connecticut, *Representative for N. Y., N. J., New England States, and Canada*

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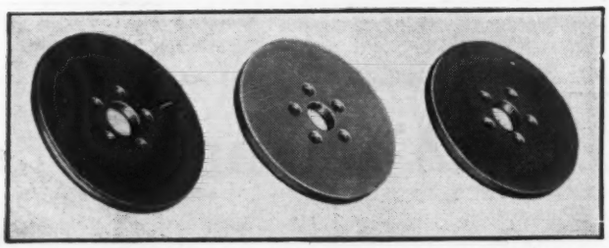


Spool and bobbin heads of different colors for identification . . . .

Fiber Bobbin Heads

Continental Diamond Fibre Company, Newark, Del., offers a new colored fiber for the manufacture of bobbin heads. It presents an attractive appearance, colors spreading to include bobbins, and in a few instances colors have been developed of special shades so that all bobbins made by one manufacturer will have the same hue, thus identifying them as the product of that manufacturer. In some cases yarn spinners have adopted a special color so that all of their bobbins can be identified and returned to them after the yarn has been used. Another big field of development that is receiving considerable attention by Continental is the use of the colored heads to identify different types of yarn. Where the practice is to dye yarn when it is in skeins with a washable dye, which is later washed out after the yarn has been woven into wearing apparel, the use of colored heads permit two operations to be eliminated, the dyeing of the yarn and the washing out of the yarn.

Leaflet by Lewis-Shepard

Lewis-Shepard Company, 175 Walnut St., Watertown, Mass., has made available a leaflet describing and illustrating the many types of skid platforms that may be used in conveying materials, goods, merchandise, parts, and products by the lift truck method of interior transportation. The number of the leaflet is 146.

Booklet on Tentacular Drive

Alexander Brothers, Inc., Philadelphia, Pa., has released a 32-page booklet on the tentacular drive which gives information and technical data on a highly efficient transmission belt. It is written in a simple and understandable manner and is based upon painstaking laboratory research, together with 10 years of service to American industry. A tentacular belt consists of the backing, leather, or fabric, to which are attached by means of special tubular rivets, strips of plastic leather possessing high adhesion when in contact with pulleys. The booklet contains valuable statistical data which could be used to advantage by plant superintendents, operation managers, and purchasing agents.

Folder by Stonhard

Stonhard Company, 401 N. Broad St., Philadelphia, Pa., has released a folder descriptive of its product, Concretite, a liquid which is used to improve concrete and mortar, the purpose of which is to produce a quicker and more thorough hydration in the setting of the cement, to bond new wearing surfaces to worn floors, and to hasten the evaporation of water in excess of that needed for proper hydration. It lubricates the mass and makes a free-working mortar with reduced liquid volume which produces a floor possessing exceptional wearing qualities, it is claimed.

Mercury Lighting Units with Long Tube

General Electric Vapor Lamp Company, Hoboken, N. J., has introduced a modernized series of mercury lighting units of the long tube, Cooper Hewitt type that are said to have improved

lighting efficiency, operating stability and appearance. The new 50-inch light source operates at 350 watts ac to supply the same light output which required 450 watts in previous models, its bare-lamp efficiency being 19.4 lumens per watt. The new 33-inch light source operates at 280 watts in contrast to a previous 350, with an efficiency of 17.1 lumens per watt. As equipped with newly designed enameled reflectors, the complete lighting units have an overall efficiency of about 15 lumens per watt. Both the reflector and tube are now intended for mounting in a true horizontal position. This type of mercury tube has the inherent advantages of a large light-source area and low unit brightness, without the use of light-absorbing diffusing glass.

Improvement in Rubber Pillow Block

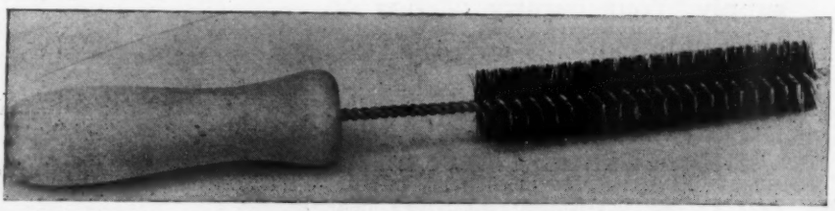
The Fafnir Bearing Company, New Britain, Conn., sometime ago announced a new ball bearing rubber pillow block, which proved welcome news to air conditioning and ventilating equipment manufacturers. Now Fafnir has announced an improvement in this rubber pillow block, the addition of the wide inner ring ball bearing with its exclusive self-locking collar. This feature makes it easy to install. The shaft is slipped through the bearing unit, the self-locking collar is engaged and turned, and the set screw is tightened. The bearing is then firmly secured to the shaft. Its removal is equally easy. These bearings are said to readily fit standard shafts without machining. Bulletin RS describes and illustrates the new pillow blocks with the new feature.

Flamenol—Insulating Compound

General Electric Company, Schenectady, N. Y., has developed a new synthetic insulating compound named Flamenol. While the new compound is similar to rubber in its characteristics, it contains no rubber and will not support combustion. It is entirely different from any insulation previously available and is termed by some as the most radical cable development in the last 25 years. The properties of Flamenol are such that it can be made a very soft and flexible compound, or made to be one with celluloid-like rigidity. It can be put into solution for coating or impregnating, and can be compounded, filled, calendered, and extruded in much the same fashion as rubber. Flamenol-insulated cable is recommended for power and control circuits at 600 volts and less, and for operation at a maximum copper temperature of 60 degrees C. It is available in a variety of colors.

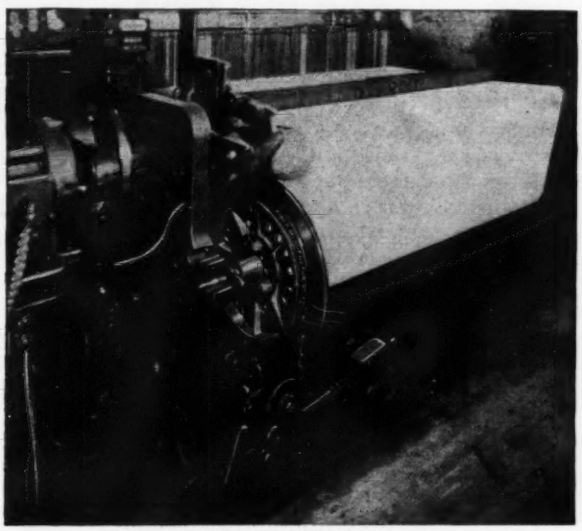
Brush for Cleaning Rollers on Long Draft Spinning

Atlanta Brush Company, Atlanta, Ga., after experimenting for several months on a brush for cleaning long draft rollers, has developed the brush as shown in the accompanying illustration. It has been found to fill a distinct need in the industry for this type of work, though it may be applied to other types of machinery.



Brush for cleaning long draft spinning rolls

UN-EVEN WEAVING ... IS COSTLY!



Patent No. 2037189

Get Uniform Weaving WITH F-M-C LET-OFFS!

Let this perfect asbestos friction let-off help you to eliminate un-even, "seconds" producing weaving in your mill. Send for free samples of the easily attached F-M-C Let-offs. Let them show you right on your own looms the smooth, even let-off, the reduction in "seconds" and loom stoppage, the elimination of "messy" oil and graphite, the freedom from weather conditions, the lack of beam wearing and scoring, their longer life, their greater economy per yard of cloth and how they do away with antiquated rope, leather and chain methods. This test will cost you nothing if F-M-C Let-offs do not satisfy you in every particular. And they come complete, ready for attaching.

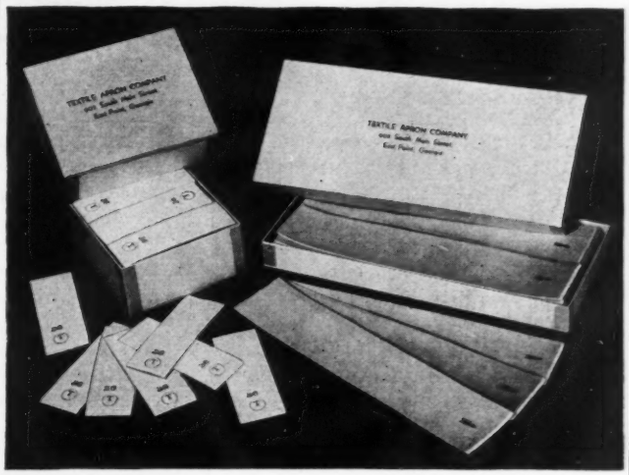
F-M-C Asbestos Brake Tape for loom brakes, ribbon and sliver lappers, extractors, warpers and under picker-head blocks. Last longer than cork, leather or other types of brake. Not affected by oil, grease or humidity. Write for sample.

F-M-C Asbestos Even Tension Slasher Cord is another product that will save you money. Made in ¼", 5/16" and ⅜" diameters. Write for sample.

Write for FREE SAMPLES and PRICES, TODAY!

More Than 75,000 Now in Use!

FIBER MFG. CO., NEWTON, N.C.



Textile Aprons that are Better! —yet cost less!!

Aprons made of the finest leathers (Bark tanned or chrome) with specialized machinery by trained craftsmen. You'll find them to be better! Yet these same gauge-tested aprons are uniform in thickness throughout. Each is uniform with the others in the same shipment and all are uniform with previous shipments, there being no variance of over 5/1000 of an inch.

These aprons are rough on the inner side to get a better grip and are evenly smooth on the outside to carry the yarn through smoothly. Properly beveled to insure a sure fit.

Because we specialize in textile aprons and have low overhead and large volume, we can furnish our high grade aprons for less money! Secure prices.

Better Service, Too!

With our ideal location, shipping facilities and set-up we can furnish you with stock sizes on ONE DAY SERVICE, (frequently it's the same day) or we can make aprons to any specification or sample on short notice. You can count on us as a steady and dependable source of supply!

SEND FOR SAMPLES!

Samples of sufficient quantity for your own trial will be furnished. Let us know the machinery or system for which they will be applied. Write today, addressing Dept. C-2.

TEXTILE APRON CO.
905 South Main St., East Point (Atlanta), Georgia.

TEXTILE APRON COMPANY,
Dept. C-2, 905 South Main St., East Point, Ga.
Please send free samples of your aprons.

We use.....(machinery)
.....(System).
Mill .....
Send to the attention of Mr.....
.....
Address .....
.....

News Items with a Textile Slant

Strickland Succeeds Gill for Stein, Hall & Company

W. B. Strickland has succeeded Russell Gill, resigned, as sales representative for Stein, Hall & Company, New York City, manufacturers of starches, dextrines and gums, in the Georgia, Alabama, and Tennessee territory of the company. Mr. Strickland has been with Stein, Hall for several years, first in the research laboratory in Charlotte, N. C., and later as sales representative in Tennessee. He is a graduate of Alabama Polytechnic Institute and has had practical mill experience.

McDonald Heads Textile Banking Company

B. A. McDonald, vice-president of the Textile Banking Company, Inc., has been elected president of the company, succeeding A. E. Duncan, chairman of the board of the Commercial Credit Company, Baltimore, Md. Mr. McDonald formerly was president of the Commercial Credit Trust, Chicago, and subsequently vice-president and treasurer of the Kelvinator Corporation, Detroit, and president of the Refrigeration Discount Corporation, a fully owned subsidiary of Kelvinator.

Swan-Finch Oil Corp. Adds Two Men to Staff

W. L. Nicholson and J. C. Satterfield have joined the sales staff of the Swan-Finch Oil Corporation, New York. Mr. Nicholson, who is a Duke University graduate, will represent the company in North Carolina. He formerly was with the Whitinsville Spinning Ring Company. Mr. Satterfield, a former representative of the Alemite Division of Stewart-Warner Corporation, will handle the company's line of oils and greases in South Carolina. A warehouse stock of these lubricants will be maintained in the principal cities of these two states.

Mackey and Burns Join Onyx

Alexander C. Mackey, formerly general manager and treasurer of the Peerless Hosiery Dyeing Company, Inc., Pleasantville, N. J., has joined the staff of the Onyx Oil & Chemical Company, Jersey City, N. J., in the capacity of consultant and special field representative on problems of hosiery dyeing and finishing. Mr. Mackey's experience in dyeing will be a valuable aid as a practical guide to the research chemists of Onyx in developing hosiery dyeing and finishing specialties.

James E. Burns has also joined the staff of Onyx and will render sales and technical service to woolen and worsted mills in the New England territory. Mr. Burns has a thorough background in the practical problems of woolen and worsted finishing; his office will be at 100 Fountain St., Providence, R. I.

Schwarz Joins Arkansas Company

E. W. K. Schwarz has joined the staff of The Arkansas Company, Inc., and will serve as technical director. His duties will also include that of advisor to the company's sales force. Dr. Schwarz is well known to the industry as technical editor of the *Rayon Textile Monthly*.

Changes in Armstrong Cork Co.

H. W. Prentis, Jr., president of the Armstrong Cork Company, Lancaster, Pa., announced several changes in the organization's personnel. H. P. Smith, Jr., has been elected vice-president in charge of manufacturing and John J. Evans, Jr., has been appointed manager of the personnel department. Other changes are: S. E. Dyke, production manager; C. F. Hawker, chief engineer; F. B. Menger, assistant chief engineer and chief project engineer; and J. A. Cummings, general superintendent of the closure plant at Lancaster, Pa. Mr. Cummings will be assisted at this factory by W. L. Clausen and E. D. Kemble, superintendents. R. R. Clark and A. W. Bassett continue as assistant chief project engineers and George A. Reinhard, Jr., has been named to serve in the same capacity.

Jordan Becomes Assistant Manager for Allis-Chalmers

C. C. Jordan, sales engineer for the past 10 years in the steam turbine division, Allis-Chalmers Manufacturing Company, Milwaukee, Wis., has been appointed assistant manager of that division. Mr. Jordan graduated from Purdue University in 1923 and began with the company in its graduate student course.

Sturdevant Consulting Engineer for U. S. Rubber

Earl G. Sturdevant has been appointed consulting engineer of the electrical wire and cable department of United States Rubber Products, Inc., 1790 Broadway, New York City. Since taking his doctorate at the University of Michigan, Dr. Sturdevant has been connected with many important scientific developments in the rubber field. In his new consulting capacity he will apply his extensive technical knowledge to the perfection of the company's wire and cable products, and to the developments in the rubber field to insulated wires and cables.

Clemson College to Get New Textile Building

Clemson College will soon have a new textile building. Governor Olin D. Johnston recently signed a bill which appropriated $300,000 for the purpose. In 1927 Clemson had 65 students enrolled in the textile courses and in 1936 there were 298. This is the occasion for great rejoicing by Dean Willis, who has looked forward to just such a program for many years.

An Announcement

American Textile Engineering, Inc., Kearny, N. J., has acquired the exclusive rights to manufacture and market Hygrolit conditioning machines in the United States. It has also taken over the complete Hygrolit technical staff and manufacturing force.

Hygrolit, Inc., Kearny, N. J., will continue to manufacture the chemical line.

Lock and Dam on Savannah River Below Augusta to Aid Textile Shippers

Development of the new lock and dam on the Savannah River below Augusta, Ga., is an achievement that will greatly aid the textile industry in that part of the country. It is estimated that approximately one-half of the annual output of the textile plants of the Augusta section is shipped to the large consuming centers in the East. The direct saving in freight charges on the goods routed via water will be a considerable saving, the goods going by Savannah for routing either East or across the Atlantic. Savings may be realized also on shipments of machinery and mill supplies. It is said that this new waterway will not diminish the revenue for the railroads as goods may now be routed to this point for distribution by rail.

Evleth Vice-President and Gen'l Manager of Brown

E. B. Evleth has become vice-president and general manager of The Brown Instrument Company, a division of Minneapolis-Honeywell Regulator Company, Philadelphia, Pa., manufacturers of industrial recording and control instruments, succeeding William J. Hajek, who retired in May on account of ill health. Mr. Evleth has been affiliated with the company for 12 years.

COLLOIDS *that* HELP *the* DYER

Diagram of typical Colloidal movement within TEXTILE ESCOLITE solution.

For many years science has been trying to give the Dyer something more than alkali for scouring and dyeing purposes. Many "assistants" and "agents" have appeared, but colloidal chemistry furnishes the final answer by uniting colloids with alkali, and so developing a new efficiency altogether in quality dyeing, with economy. When dissolved, this new substance makes a solution having physico-chemical properties entirely unlike any common alkali. Greater in penetration, more thorough in circulation through the goods, powerful in dispersing dyestuff through the solution, this new colloidal-alkali opens new possibilities for the Dyer who wants to produce exceptional dyeing effects.

TEXTILE ESCOLITE

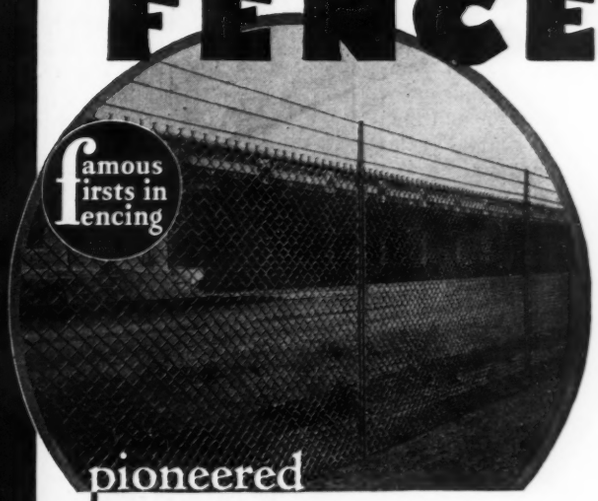
COLLOIDS HAND IN HAND WITH ALKALI

A solution of TEXTILE ESCOLITE has a two-phase character which is high-alkali and high-colloid in type. No free causticity is present. TEXTILE ESCOLITE is safe, free-running, soluble, economical, scientific. A new and different aid to level, brilliant dyeing.

Write to The

COWLES Detergent Co.
10525 Carnegie Avenue Cleveland, Ohio

PAGE FENCE



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STAINLESS STEEL* fencing . . .

For 54 years PAGE has been identified with the most famous firsts in fencing. America's first woven wire fence was made by PAGE in 1883.

With no manufacturing obligation to any one metal, PAGE is the only fence consistently associated with the greatest names in metals. Page-Allegheny Stainless Steel fencing was pioneered and perfected to provide immunity to rust without protective coating, tensile strength four times that of low carbon steel, long life and sheer beauty. It is possible to use lighter gauge Stainless Steel wire to secure strength equal to much heavier fences.

*ONE OF 5 SUPERIOR FENCE METALS

PAGE FENCE is offered in 5 superior metals to meet every condition in fencing—Page P-12 Copper-bearing Steel, Page Armco Ingot Iron, Page-Alcoa Aluminum, Page-Allegheny Stainless Steel and Page genuine Wrought Iron. All Page P-12 galvanized fence—mesh, fittings, top rail and new P-12 Wing Channel Line Post—is covered by the 12-dip Preece Test guarantee, the highest known to the industry.

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AMERICA'S FIRST WIRE FENCE—SINCE 1883

Barth Named President of Graton & Knight

Frederick E. Barth, who for the past 11 years has been vice-president of Graton & Knight Company, Worcester, Mass., was elected president of the company, succeeding the late Frank H. Willard. Mr. Barth has been with the company since 1919, serving first as office manager and then as general sales manager from 1924 until 1926 when he was elected vice-president and assistant general manager. He is the author of a number of articles on various phases of cost accounting and leather manufacturing.

Mr. Barth

Sipp-Eastwood Representative

The Warp Twisting-In Company, 9 East 40th St., New York City, has announced that it has appointed the Sipp-Eastwood Corporation, Paterson, N. J., as its exclusive sales representatives in the United States.

Chapman Represents Clarage

D. B. Chapman has been appointed southeastern district manager for the Clarage Fan Company, Kalamazoo, Mich. He will work with the various southeastern representatives of this manufacturer in the sale of fans, blowers, and unit heaters for industrial use. His offices will be in the Hurt Building, Atlanta, Ga.

Booklet by Gerrard

The Gerrard Company, Inc., 2915 West 47th St., Chicago, Ill., is distributing an attractive pictorial catalog of freight carloading stowage braced by the company's galvanized round wire strapping or metal ties that prevent damage to heavy or light freight carloads of machinery, mixed merchandise, oil drums, bales and cartons of textiles, and bottles. Many new and improved methods of wire bracing that have practically abolished transportation damage claims appear in the numerous illustrations.

Cutler-Hammer Opens Office

Cutler-Hammer, Inc., Milwaukee, Wis., has opened a new sales office in Dallas, Tex., to provide better service facilities for its customers in the southwestern territory. The new office, located at 624 Santa Fe Building, will handle the sales of the complete Cutler-Hammer line of electric control apparatus.

Change in Name

The Viscose Company has announced that from now on the name of the company will be The American Viscose Corporation. William C. Appleton is president of the company, succeeding Samuel A. Salvage who has become chairman of the board.

Kennedy Company Represents Philadelphia Drying Co.

The W. A. Kennedy Company, Charlotte, N. C., is now acting as southern representative for The Philadelphia Drying Machinery Company, 3351 Stokley St., Philadelphia, Pa.

Griffin Joins Staff of Jacobs

Dan B. Griffin, graduate in the Class of '36 from Davidson College, has joined the sales staff of The E. H. Jacobs Manufacturing Company, Danielson, Conn., and Johnson City, Tenn. Eventually Mr. Griffin will be located at Johnson City and travel among the textile mills of the South.

Morrell—New Company

Morrell Machinery Service Corporation, 302 Broadway, New York, has been formed to sell a patented yarn lubricator which permits coning of all deniers at high speed. This lubricator is used for raw silk and acetates. A specially constructed lubricator has been designed for cotton.

Houghton's Research Sales Staff

E. F. Houghton & Company, 240 W. Somerset St., Philadelphia, Pa., have announced the organization of the research sales staff, each member of which is a specialist in his own field. The staff is said to be set up to function with the utmost speed and efficiency, and its primary requisite is to render impartial and expert service to customers and industry as a whole. The research sales staff is under the supervision of L. D. Holland, manager of marketing research. The actual staff organization is as follows:

H. C. Roberts, manager, textile research.

E. R. Manning, textile research (rayon).

Albin Johnson, research (silk).

C. L. Shelton, research (wool).

C. P. Geen, manager, lubrication research.

G. W. Esau, manager, metal working research.

O. M. Gibson, metal working research.

E. L. Ward, metal working research.

J. N. Smith, manager, leather research.

A. Ruwell, leather research.

R. Keane, leather research.

Folder on Cranes

The Cleveland Crane & Engineering Company, Wickliffe, O., has made available a folder describing the various types of cranes, and especially pertaining to the tramrails for loads up to 3 tons. The company specializes in complete systems for overhead handling of materials or products from the car to the truck or storage, and to and through manufacturing processes. It is said that there is a system to meet the overhead handling requirements in all industries. Installation views of the tramrails are given in the folder.

Tull Distributes Boston Gear Works Products

J. M. Tull Metal & Supply Company, 285 Marietta St., N. W., Atlanta, Ga., is now the Georgia distributor for Boston Gear Works, Inc., North Quincy, Mass. This equipment includes that for power transmission and gears, speed reducers, ratiomotors, sprockets and chains, ball bearings, universal joints, shaft supports, couplings, etc.

Obituary Items

Robert F. Gardner and his wife were fatally injured by a hit-and-run driver early in June when they were visiting in Gastonia, N. C.; Mr. Gardner formerly was superintendent of the American Mills Plants 1 and 2, Bessemer City, N. C.

T. H. Moore, for 5 years superintendent of the Winona (Miss.) Cotton Mills, succumbed the latter part of May to injuries received when a train struck his car.

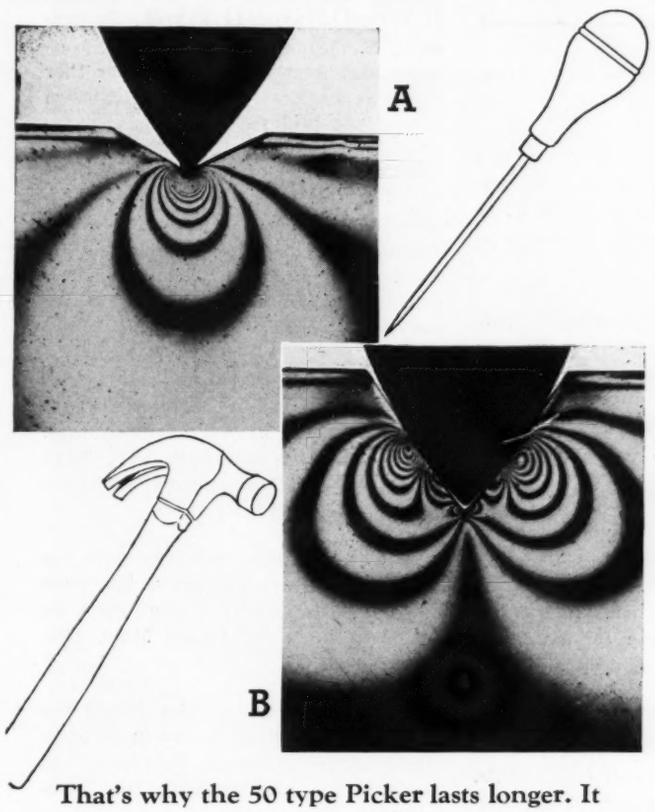
Charles Dexter Owen, 62, treasurer and co-founder of the Beacon Manufacturing Company, Swannanoa, N. C., succumbed to a heart attack May 24.

William Howard Dodson, for 20 years village superintendent of the Riverside & Dan River Cotton Mills, Danville, Va., succumbed to an attack of pneumonia May 29. He had been with the mills since 1901.

Charles N. Borden, former treasurer of the Richard Borden Manufacturing Company, Fall River, Mass., passed away recently.

Charles E. Riley, president of the H. & B. American Machine Company, Pawtucket, R. I., and of the Booth Manufacturing Company, New Bedford, Mass., passed away June 4 at the age of 85. Mr. Riley, who was born in Burnley, England, was a director in various textile enterprises both in New England and in the South, and continued active in business until three years ago. He was the organizer of the H. & B. American Machine Company and was active head of the corporation.

THE "LIFE SAVER" HOLE PREVENTS ICE PICK ACTION

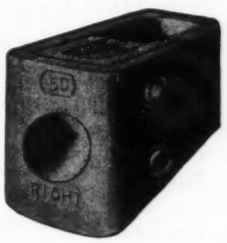


That's why the 50 type Picker lasts longer. It catches the shuttle's shoulder, not its point.

A. When a picker hole is not cut the correct size, shape and depth, and not properly located, the shuttle point acts like an Ice Pick and breaks down the Picker quickly.

B. The hole in the 50 type Picker is scientifically correct so the shuttle *point* doesn't strike the Picker. Each blow is caught back of the shuttle point, and its force distributed throughout the picker.

50 type Pickers (Patented) are the only pickers with the "Life Saver" hole. They go on the stick easier, and replacements are necessary only half as often. Place an order for a trial installation today.



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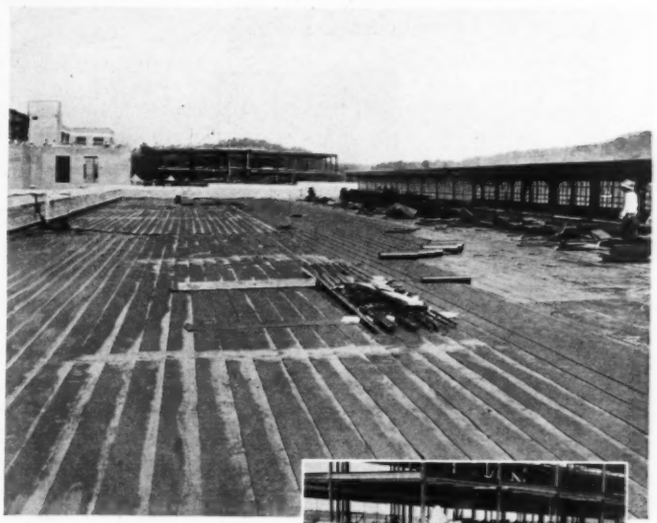
GOODYEAR PREVENTS ROOF CONDENSATION... *with Armstrong's Corkboard*



INSTALLING ARMSTRONG'S CORKBOARD *on the roof of the Goodyear plant at Rockmart, Ga. The architect, Robert and Company of Atlanta, specified 1½" thickness to control condensation. General Contractors, A. K. Adams & Company; roof installed by Birmingham Furnace and Roofing Company, Birmingham, Ala.*

WHERE high temperature and high humidity are combined inside a room that is not insulated, moisture condenses on the ceiling in winter. Often this moisture drips, causing damage to materials and machinery below.

That's why Goodyear Tire & Rubber Company insulated the roof of its weave shed in this plant at Rockmart, Ga., with Armstrong's Corkboard. This efficient insulating material effectively checks condensation. Because cork retards the passage of heat through the roof, the ceiling doesn't become chilled. Thus moisture has no chance to form and drip.

Avoid condensation in your plant. Let Armstrong's Corkboard Roof Insulation help you control temperatures for more efficient, more comfortable working conditions. Send the coupon below for complete information.

Armstrong's **CORKBOARD**

ARMSTRONG CORK PRODUCTS COMPANY,
Building Materials Division,
1000 Concord Street, Lancaster, Pa.

Please send me your 40-page illustrated book; "Armstrong's Corkboard Insulation for Walls and Roofs."

Name.....

Company.....

Street.....

City and State.....

PERSONAL NOTES
about Men You Know

ELMER J. MCVEY has been made manager of the Charlotte, N. C., office of H. & B. American Machine Co., of Pawtucket, R. I., succeeding the late J. WALTER RIMMER. Mr. McVey has been connected with the H. & B. company for the past 16 years, holding various positions in the shop and office at Pawtucket. For the past two years he has been assistant to the vice-president, E. L. MARTIN. C. M. POWELL is also connected with the Charlotte office, and FRED DICKINSON represents the company with headquarters in Rockingham, N. C., and FRITZ ZWEIFEL with headquarters in Spartanburg, S. C.

Mr. McVey

H. H. FIELD, formerly connected with the Eagle & Phenix Mills, Columbus, Ga., has become superintendent of dyeing and finishing at the Stonecutter Mills Company, Spindale, N. C., succeeding P. J. WOOD, who came to the Stonecutter plant about a year ago to aid in the erection of a dyeing and finishing plant and to organize the personnel.

J. C. FARMER, formerly assistant superintendent of the Fieldale (Va.) Mills of Marshall Field & Company, has become general superintendent of Rockfish Mills, Hope Mills, N. C. Mr. Farmer is a graduate of the textile department of N. C. State College.

E. T. COMBS, who has been superintendent of the Cliffside (N. C.) Mills, has become general superintendent of the California Cotton Mills Company, Oakland, Cal., succeeding W. R. BARNETTE, resigned.

RUDOLPH BOEHRINGER has resigned as president of the United States Piece Dye Works, Lodi, N. J., and will sail for Europe; he will join his family in Berne, Switzerland.

M. H. SEIGLER has been made superintendent of the Anderson (S. C.) Cotton Mills, which were recently taken over by the Grendel interests.

J. RUSSELL FENNELL, a student of the Clemson Textile School, is now located at the Neely Cotton Mills, York, South Carolina.

A. C. LINK, Winnsboro, S. C., has accepted the position of assistant superintendent at the Stark Mills, U. S. Rubber Products, Inc., Hogansville, Georgia.

EARL M. HODEL, who has been superintendent of the North Star Woolen Mill Company, Minneapolis, Minn., has been made superintendent of the Chatham Manufacturing Company, Winston-Salem, N. C.

RONALD C. FORREST, Oakland, Cal., has become resident manager of the California Cotton Mills Company's plant, located at Selma, Ala., succeeding L. A. WARD, resigned. Mr. Ward, who has been at Selma for a number of years, has not announced his plans for the future.

JOHNSTON MCCORKLE, formerly superintendent of the Hartwell (Ga.) Mills, has accepted the position of superintendent of the Calhoun Mills, Calhoun Falls, S. C.

HARRY B. ILER, Greenville, S. C., for the past 14 years a representative in the Southeast of L. R. Wattles & Company, Canton Junction, Mass., has joined forces with Hart Products Corporation, New York City, and will cover the textile trade in North and South Carolina.

EARL CARTEE, formerly overseer of carding and spinning at the Gayle plant of Springs Cotton Mills, Chester, S. C., has accepted the position of general overseer of carding and spinning at the Ora Mill Company, Shelby, N. C.

M. R. GARDNER, recently overseer of spinning at the Osprey Plant, Bibb Manufacturing Company, Porterdale, Ga., has become superintendent of the Raeford (N. C.) Cotton Mills Company, a unit of the Morgan Cotton Mills. J. C. EDWARDS is general superintendent of these plants.

R. L. SAULS, who has been superintendent of the Carolina Narrow Fabrics Company, Winston-Salem, N. C., has accepted the same position with the Fiber Manufacturing Company, Newton, N. C.

CHARLES D. OWEN, JR., Biltmore Forest, N. C., formerly assistant treasurer of the Beacon Manufacturing Company, Swannanoa, N. C., has been elected treasurer of the company, succeeding his father, the late CHARLES D. OWEN. HENRY L. TAYLOR, Swampscott, N. C., has been elected vice-president and STEPHEN C. OWEN, brother of CHARLES D. OWEN, JR., has been named assistant treasurer.

WILLIAM ALEXANDER president of the Textile Dyeing & Printing Company of America, Paterson, N. J., has resigned and is devoting his time toward extending his chemical enterprises, the Industrial Chemical Company, Fair Lawn, N. J.

HENRY G. SIMONDS and HENRY G. NICHOLS have been made vice-presidents of Pacific Mills, Lawrence, Mass. Mr. Simonds has been with A. E. Colby Company and Mr. Nichols with the Otis Company, Ware, Mass.

LEO SCHLESINGER, formerly with the Wellington Sears Company, has been made superintendent of the rayon division of the Farr Alpaca Mills, Holyoke, Mass.

WILLIAM R. HUTZ, who joined the Sunbury Converting Works in an executive capacity during February, has resigned his position with that company.

SAMUEL RHODE, JR., has been made manager of the Rodman-Heath Cotton Mill, Waxhaw, N. C. T. J. GRIBBLE is superintendent of this plant.

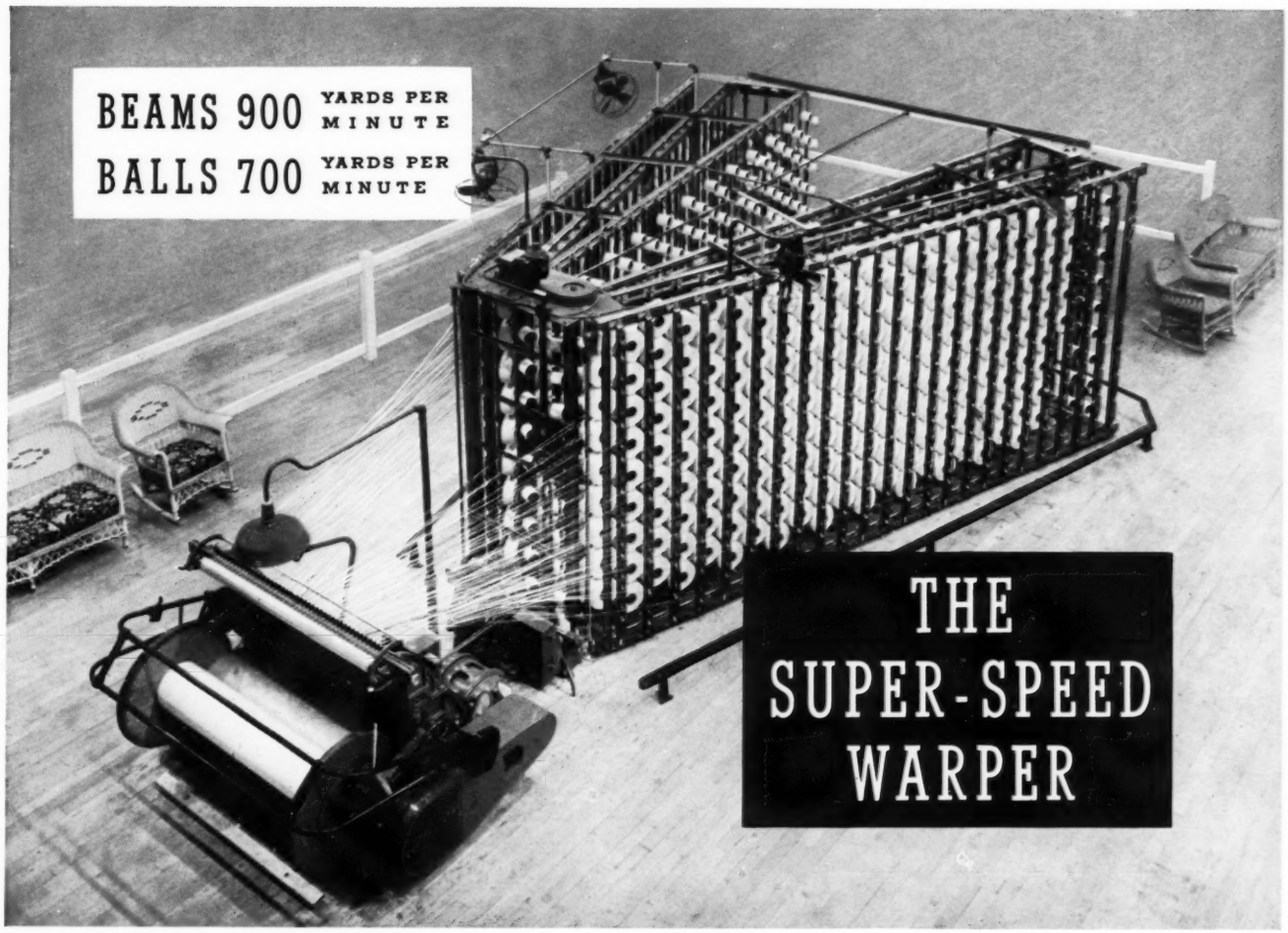
J. C. STROUD has become superintendent of the Marlboro Mill No. 5, Bennettsville, S. C. Mr. Stroud formerly was with the Edna Mills Corporation, Reidsville, N. C.

G. A. JOHNSON, of the Sycamore (Ala.) plant of Avondale Mills, has been promoted to superintendent of the Mary Ann Plant, Stevenson, Ala.

R. A. HAYNIE, who has been with the Superior Yarn Mills for 27 years, has been made superintendent of the company's plant at Mount Holly, N. C. Formerly he was superintendent of the plant at East Monbo, N. C.

E. A. (EARNEST) JOHNSTON, formerly overseer of carding at the J. W. Sanders Mill No. 3, Meridian, Miss., has been transferred and promoted to night superintendent of the Aponaug Manufacturing Company, Yazoo City, Miss., another of the Sanders mills.

SHERMAN ANDERS has been made superintendent of the J. W. Sanders Cotton Mill No. 3, Meridian, Miss.



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—THIS YEAR'S IMPROVEMENTS

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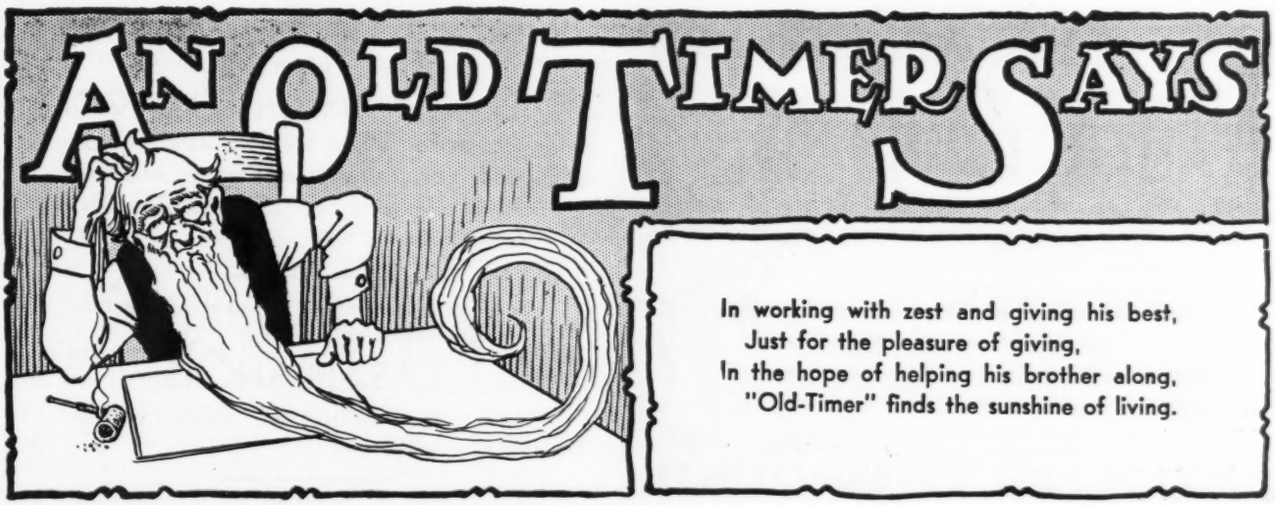
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

The Labor Problem

AS LABOR seems to be the paramount subject of discussion by all of the mill presidents I have an opportunity to have conversations with these days, and as all of the newspapers, both in the North and in the South, take up most of their front-page space with reports of labor activities, I suppose some further discussion on the OLD-TIMER page will be in order.

At all of the meetings of the associations of mill presidents, practically every speaker on the program, though his subject may be far from such a discussion, will bring into his speech various phases of the labor situation.

OLD-TIMER also comes in contact with many overseers and superintendents, in his rounds from state to state, and there seems to be something in connection with the overseers and superintendents in this matter that he cannot quite understand; that is, the relation of the attitude of mill presidents, in a great many cases, toward the labor problem in connection with the relation of overseers and superintendents toward the problem.

Inasmuch as the overseers and superintendents are the men who come directly in contact with the operatives, it has always been OLD-TIMER'S idea that they are the men who are most vitally interested in labor conditions; therefore it is rather difficult for him to reconcile himself to what he finds in many places—that is, mill presidents and their associations talking practically nothing but the labor situation, while the overseers and superintendents are having practically nothing to say. In fact, most of them with whom I come in contact seem rather luke-warm when I broach the subject to them.

Such a procedure seems just backwards to me, because only a few years ago the overseers and superintendents were the men who had the most to say about any labor problem which came up in the individual plant, and the mill president usually backed up the superintendent in his decisions and in turn the superintendent backed up his overseers.

I am alarmed because I see where such a trend could take us. There is the danger that the men who are in direct charge of the operatives could have no voice at all in the policies of the industry concerning labor management, and lose our standing of responsibility and authority in the management of operatives. Gosh, fellows, it scares me to even think about it.

I believe that, as always, the wise president will take the time to keep his superintendent and overseers posted on what developments are outside their sphere, and to have them bring to him the benefit of their experience and contact and judgment as to the local situation. He should consult with them freely, and lean heavily upon them; he should let them know, and let the workers know, that the superintendent and overseers are just as much a part as ever of management. Most trouble of any kind comes about eventually as a result of misinformation and lack of understanding. The worst thing a mill executive could do, in my opinion, would be to ignore, because of the magnitude of the present crisis, the invaluable experience and ability of his key-men; and to do anything that will cause them to flounder or that will result in decreasing their standing of authority and respect or that will cause them, in spite of their natural interest, to develop an attitude of indifference.

Only yesterday I was in conversation with a superintendent of a mill and he remarked that the union had announced that they would strike tomorrow (that is, today) at two o'clock, when the afternoon shift came on. I asked him what the strike was called for, more pay, less hours, or what.

"Oh no, there is no kick on our wages or hours or any other working condition; they are striking only for recognition of the union."

"Well, what's going to happen when they strike?"

"They (the committee) will go out to see Mr. X."

"And who is Mr. X?"

"Hell, he is the president. Don't you know who our president is?"

There you are, fellows. This superintendent did not seem to be so very much concerned; he merely said they would strike and go out to see the president.

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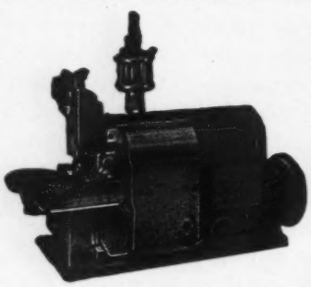

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I finally asked him what he would do if there was no mill president there and if they (the committee) had to come to him. He said: "I would not wait until tomorrow; I'd go right out to the power plant and pull that switch right now."

It would not be ethical for me to go further into detail and say all of the things that the superintendent told me he would do, but, oh boy! did he get warmed up when I asked him what *he* would do if the situation were put up to him.

I could not keep from thinking, as I drove away from his plant, how that superintendent must feel in such a situation; how helpless he must feel under such conditions, and how he must feel towards those operatives when he goes in the mill to give orders. All you younger superintendents and overseers may say that OLD-TIMER is just an old fogy, he is just one of the back numbers, he can't change his old way of thinking. Well, all I can say is that in all my experience in the mill, as a weaver, a loom fixer, an overseer, a superintendent and a manager of some pretty large mills over a period of nearly thirty years, at least OLD-TIMER never faced a situation like the one just described, in his relation to the mill president, and the only time I ever had a serious labor situation—that is, facing a strike—I did just what that superintendent I talked to yesterday said he would do, and the president of the mill backed me up 100 per cent, with the result that we started the mill up without conceding a single thing.

Don't get it into your heads, fellows, that just because the Wagner Act has been made a law and everything has apparently landslided to labor's side, that we must simply fold our arms and sit still while the avalanche overwhelms us. Somebody must use some brains in handling the labor situation, and I do earnestly plead that the mill presidents take the overseers and superintendents into full consultation concerning the attitude and policy of the plant.

Here are a few references in some of the speeches and conversations I have heard in the last few months by and from mill presidents and other speakers at textile association meetings:

By a man who is very close to the administration in Washington: "National legislation as to hours and wages is certain to come."

"We (meaning the mills) are going to have to deal with the Federal government."

"The textile industry should approach the change with an intelligent and receptive mind and not a punitive one."

"We are going through a period of transition which is affecting the destiny of the world. The mind of the country is going somewhere and we must give up some of our old deep-founded prejudices."

There it is, boys. Why in heck aren't we getting ready for it? Your first question naturally is, what can we do? And how I do wish I knew the answer to that one. But I do know that we are not going to find the answer by not trying.

Now, I am ready to admit that management is partly to blame for the labor troubles now brewing, and I think this is largely because most managements have failed to take their employees into their confidence in the right way; failed to let them know enough about the financial end of the business; failed to give the general public the information it should have. Operatives and the public read in the papers that the mills have made so many thousands or hundreds of thousands of dollars and are paying the usual 6 per cent dividend, or whatever the dividend is. Now, mill operatives and the public see these big figures without taking into consideration the money invested or any of the other things which should be considered—and without thinking feel that they, the operatives, are not getting their part; the politicians think they are not charging enough taxes, etc., etc.

Yet I know of cases where mills have raised wages but have not paid a nickel to stockholders in three years. In numerous cases it can be shown that capital has rated second to wages. Also it can be truthfully pointed out that the wages of capital (interest or dividends on capital) have been reduced far more than the employees' wages.

During times when mills are actually losing money, but still operating to give the operatives work—if the mills are not allowed to build up a surplus, how can they do such things in the future?

There is an old axiom which says, "Strife springs from misunderstanding", and I think the mills are to blame for a great deal of the misunderstanding about them that prevails today. And, as I have said, I believe that working closely and harmoniously and helpfully together—by the presidents urging their superintendents and overseers to help them—that the problem can be met sanely, safely, and to the best interests of all, including those of our employees.

Informative Book Available

Modern Drafting in Cotton Spinning is the name of the book by J. Noguera which gives a comprehensive study of high drafting, especially pertaining to the Casablancas system as applied to spinning and mule frames, roving frames, and drawing frames. This book of nearly 200 pages is the direct outgrowth of a collection of notes on the subject which were published in booklet form a short while ago, and which met with such favorable comment that the author took the opportunity to revise the original and add to it considerably.

The book begins in a general discussion of the purpose of drafting, graphically explaining evenness and the drafting wave, and being written in a most understandable manner that may be appreciated by both the student and the practical man. Several theories are propounded that are converse to popular opinion, but these are substantiated with proof. The evolution of the Casablancas system is interestingly told and convincingly advocated by the author.

Of especial interest to the reader is a chapter devoted to the economics of high drafting in which the various monetary savings and manufacturing benefits are effected. In connection with the subject of high drafting, the twin sliver drawing frame is discussed, as are the systems of extended control and compounded drafts.

The book is published by Chorley & Pickersgill, Ltd., Leeds, England, and sells for 9 shillings 6 pence (about $2.00). It may be secured direct from the publishers, or, as a convenience, through COTTON'S book department.

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HOW OTHER MEN MANAGE

Practical Discussions by Cotton's Readers On all Varieties of Mill Subjects

Sooty Yarn in Spinning

EDITOR COTTON:

This is in reply to the question concerning sooty yarn which your "CONTRIBUTOR NO. 6657" asked on page 127 of the June issue of COTTON. He stated "it seems that when the mill becomes the least bit cool with excess humidity we have an accumulation of soot that we think is caused by the condensation of moisture settling on the yarn. We keep our windows tightly closed."

In my opinion, sooty yarn is not caused from dirt that is in the room itself. If that were the case, there would be sooty yarn produced all the time. However, it is a fact that, in certain localities, where there is considerable smoke and soot hanging low in the air, this works into the spinning room and will produce sooty yarn.

While "CONTRIBUTOR NO. 6657" may think that keeping windows tightly closed will keep out such soot, he is probably mistaken. The particles of soot that give trouble are very small, microscopic, in fact, and pass through small cracks and crevices about the same as pure air would do.

The speed of rotation of the spindles undoubtedly produces an electrostatic effect that tends to draw these microscopic smoke particles into the yarn and thus produce discoloration.

Runs Test in Filtered and Unfiltered Air

Some time ago we made an interesting test in running some spindles of yarn in a box that was supplied with filtered air; a corresponding set of spindles were being run in the open room air. It required a very much longer time for the yarn in the filtered air to become discolored than it did the yarn in the normal air.

It is rather difficult to remove smoke from air. The ordinary filter will take out 95 per cent, or more, of the solid particles of the dirt, such as dust and soot, but the particles of smoke being so very much smaller, pass through the ordinary filter material more readily and it is difficult to remove smoke in this manner. Furthermore, smoke is of an oily, sticky nature, and the ordinary air washer will not condense it completely.

The only feasible way that we know of to *lessen* this difficulty is to make the windows as tight as possible and then force into the room a reasonable amount of fresh outside air that has been washed and passed through filters, thereby creating a slight pressure inside the room, so that there will be no outside air leaking through the crevices around the windows, doors, etc. By creating this inside pressure the leakage is all outward, and the smoke and other foreign matter being rather completely removed from the air, will lessen greatly the amount of soot present.

In my opinion, humidity has but little to do with sooty yarn, as experience has shown that sooty yarn is produced to just about the same extent regardless of whether the spinning room is run at 45 to 50 per cent humidity, or from 60 to 65 per cent. The difficulty is that the soot is an actual suspension in the air of solid matter of microscopic dimensions, which can be removed largely, but not wholly, by properly designed mechanical filters.

CONTRIBUTOR NO. 6658

EDITOR COTTON:

In answer to the question on sooty yarn by "CONTRIBUTOR NO. 6657", we do not have this trouble; that is, not enough to notice because we have warp wind, but on the filling wind the bottom of the bobbin is exposed so long that it is very noticeable. As "CONTRIBUTOR NO. 6657" keeps his windows closed, he should not be troubled by soot, as a lot of it is caused by smoke. He could tell where this soot or smoke was coming from by hanging a piece of fabric over the windows; if the soot is seeping or filtering in the crevices then it will show up on the cloth.

We have no suggestions to make except that the frames be kept as clean as possible.

CONTRIBUTOR NO. 6659

EDITOR COTTON:

Responding to the inquiry of "CONTRIBUTOR NO. 6657" who is having trouble with sooty yarn, I am unable to give him the technical explanation for this condition. We do find, however, that it occurs only in cool or cold weather and principally from two to 8 A. M. The yarn on the bobbins that have stood overnight seems to be cold and damp and collects soot and dust until the mill warms and the humidity conditions become normal for running.

Open Doors Cause Sooty Yarn

Where windows are kept closed it alleviates this condition, but opening doors in normal ingress and egress affects it and causes more soot to enter the plant. The only real remedy we have found is to keep the mill warm, reduce humidity overnight, and where doffs run over an hour or two, use the reverse warp wind. Each layer is then covered by each subsequent layer and the soot does not have an opportunity to accumulate and show up on the yarn. The reverse warp wind has its disadvantages and each individual must

decide whether he wishes to use the reverse warp wind or to have sooty yarn.

CONTRIBUTOR No. 6660

EDITOR COTTON:

"CONTRIBUTOR No. 6657" has brought up the question of sooty yarn in the spinning room. This is no new trouble with mills making the finer grades of yarn; they have had it for a number of years. The only solution that I have found is to use what is known as a reverse warp wind traverse, that is, instead of starting the traverse on a new doff the full length of the bobbin, start it at the short length of the traverse and let it build out longer at each stroke. This does not eliminate the soot but it so thoroughly distributes it that it is never noticed.

My experience is that spinning does not run as well with this type of traverse as with filling or regular warp and it is harder to wind or spool off, but where soot is a detriment to the yarn, it is the only solution that I have been able to find that is worth while.

CONTRIBUTOR No. 6661

"Wash" Asks Some Tough Ones

And answers an old question without beating about the bush . . . . . .

EDITOR COTTON:

On page 141 of the February, 1937 issue of COTTON I find an article entitled "Says 'Wash' Is Wrong on Fly Frame Question". Contributors number "6570" and "6569" give us the same earmark. I have already admitted that I was wrong, for once in over 20 years, but the letter from "CONTRIBUTOR No. 6575" pleases me and at the same time gives me the opportunity to prove that the textile graduates, "6570", "6569", and "6575" lack practical experience.

The original question was "If I am setting up a fly frame among others of a different make and can't get the right flyer speed, hence the front roll speed desired, can I effect the desired change with the gears?" Instead of writing for over two pages, "CONTRIBUTOR No. 6575" could have said:

The bell gear should be increased to the same proportion as that of the spindle gear in order to make the standard and excess speed equal at doffing time. Reduce the intermediate gear in the horsehead to the same proportion and make a new bore in the horsehead to accommodate the smaller intermediate gear.

Now some questions for these smart fellows:

1. Referring to any differential, what is meant when we state "the additional compounded speed or additional impetus caused from the cone"?

2. Why is the Holdsworth compound a more simple proposition regarding the cones than a compound wherein there is a difference in speed between the spindle and the bobbin?

3. Can the same cones be used on both the Holdsworth and any new differential? If not, why?

4. When cones are modified for any differential motion, should more factors be considered than with the Holdsworth motion? What are the factors?

5. Which type gives us the most simple and sure foundation of a pair of cones, the Holdsworth motion or any differential? Please explain fully.

If "CONTRIBUTOR No. 6575" will answer these questions, we will all be much the wiser.

WASH (R. I.)

Pointers on Pickers and Cards

EDITOR COTTON:

I would like to take this opportunity to pass along to the readers of the "HOW OTHER MEN MANAGE" department a few pointers on the running and setting of pickers and cards and drawing frames that I have found to work well.

Pickers

The hopper feed should be set so that the hopper is kept three-quarters full of cotton at all times. The spiked apron should be set to run about 75 feet per minute, with the stripper set close enough to the apron so as not to let a large feed of cotton pass through. From 25 to 40 blows per inch is the proper number if the opener beater is of the blade type.

I consider the following settings to be ideal for medium-length staple: Beater 3/16-inch from feed roll; first grid bar 1/4-inch inch from path of beater and this distance increased so that the last bar should be from ½- to ¾-inch from the path of the beater. The bars should be set at such an angle that heavy particles will pass through them and drop into the mote box when the beater strikes them. The loose cotton will be drawn by suction to the screens. It is well to set the grid bars from ⅛- to ¼-inch apart at the nearest point.

When it is discovered that the pickers are making thin places in the lap, first check the apron to see if in any manner it is slipping, and check the gears on the end of the feed roll; if these gears are not matched, this will cause a slight draft by the feed roll running too fast—thus causing the lap to stretch—making thin places. Bad places will be caused by the plucking of cotton from the feed roll to the beater, and often a worn bearing on the end of the feed roll will be the source of this trouble—also worn gears will make the feed rolls run jerky.

Enough laps should be kept on hand so that the pickers may be stopped in sufficient time on the week-ends to be cleaned; this should be performed by fan draft or the pipe draft system. If the cage covers are thrown back while this work is under way, the operatives will then be able to clean all chokes so that the pickers are left free to inspection.

Pickers should be overhauled thoroughly every 12 weeks. At this time new leathers should be inserted where needed as bad leathers will fill the dust house with white cotton. It is best to run the laps on the heavy side as the stock has a tendency to lighten or dry out, also it is much easier to lighten on the drawing than to heavy on it.

The card should be run bare, stripped, and the ends of the doffer, cylinder, and inside of the flats cleaned well. Then remove the doors and wipe around them, subsequently replacing all doors except the center one.

The bearings and shafts should be wiped to prevent oil from reaching the fillet. Next grind the card, including the flats, cylinder, and doffer at the same time. The cylinder should be ground heavier than the doffer. Next remove the feed roll and clean and oil the bushing; this should be done each time the card is ground.

Reset and clean around the licker-in and feed plate every time the card is ground. Every 6 months remove all screens, set the percentage plates, doffer comb, and make a general setting throughout, seeing that all shafts are free, etc. Card clothing should be kept up to the minute and that which is loose redrawn. When flat chains become worn and stretched until it is necessary to remove two flats, a new chain should be installed.

Drawing Frames

The trumpets of a drawing frame should reach all the way to the calender rolls. If they are too short they will cause uneven sliver. Those drawing frames having metallic top rolls should be watched closely so that they will not cut the sliver. When the rolls are changed, it is best to change only the front rolls, top and bottom, but the top rolls should be a fraction larger than the bottom ones; this will give better results when using a medium length staple.

CONTRIBUTOR No. 6613

"The Old Card Doctor"

A report of a visit of the "card doctor", how he diagnosed the "patient" and what he prescribed for putting it back in first-class operating condition.

EDITOR COTTON:

As we pen these lines we have in mind a few things that might be worth while to consider in doctoring a card that has been allowed to operate in an unhealthy condition with the management wondering why there is a prevalence of bad carding with such good cotton. But the poor card has been so neglected until its health is so run down that it cannot do the work it should.

The card doctor has been called to investigate and diagnose the card's trouble, even going to the work before the card has a chance to get it. He makes notes of some detrimental facts and conditions and begins to prescribe permanent relief to the ailments.

Card builders always fit feed rolls with bearings that allow 5/1000-inch clearance between the feed roll and the feed plate so that the mass of fibers forming the lap will be gripped between the feed roll and the feed plate and not jerked into the licker-in in small tufts that cause an unsatisfactory web. Well, the card doctor starts building up on worn-out feed roll journals and fitting bearings to 1/64-inch clearance and finds that he has this evil corrected.

The doctor then starts looking for some other disastrous ailment and finds a sure enough bad one; the licker-in is resting in worn shroud bearings so that when settings are made, there still are no settings. When the card doctor asked one of the grinders some of the settings he was informed that the feed plate was set to 10/1000, the licker-in to cylinder 7/1000, and the mote knife to licker-in 5/1000. Whereupon the doctor pulled out his gauge and examined the settings himself. The grinder then told the doctor that some of the feed roll bearings were worn so that he had to set his licker-in so it would not strike the feed plate, cylinder and mote knives.

This began to get interesting to the doctor, and to the grinder too, and they agreed to get down to business. The grinder ran down to the machine shop and had the feed roll fixed with smooth journals to fit the bearings and had the old bushing removed and a new one inserted and came back feeling jubilant because the card doctor had told him a thing or two. Although this helped matters the grinder said it still was not enough improvement to run 35s to 80s yarn. The doctor said that he had just given the card a double dose of rectifier but that its health had sunk so low that further prescribing was necessary. It was next found that no screens had been cleaned, no bent ribs straightened, or loose ones soldered, etc., since the grinder had been on the job and that was about seven years.

Then the doctor noticed that the flats were dragging the plate and the grinder offered to take up the chain two flats. But this was vetoed by the doctor, who then prescribed a new set of chains. The flats were also dull and the grinder offered to grind them some more but the doctor noticed that the emery was dull and that it had not been changed in six or seven months. The fixer thought this was all right, however. The doctor told the grinder to re-cover the drum every tenth card and the traverse grinder every fifth or sixth card because after the grooves on the emery were gone the wire was only rubbed and there was no grinding effect. When the emery is dull, explained the doctor, only a blunt face is put on the wire but when good emery is used the wire is really sharpened.

Later the grinder called the doctor to a card that had been ground four times with good emery and the doctor told him that the wire had a good carding point on it, but that the clothing was too loose. After the clothing was tightened the grinder called the doctor to inspect the web but he turned it down flat and suggested that both of them inspect the card together. In the inspection it was found that the settings were good but that the condition of the duplex rolls was bad.

When this was corrected and the web still wasn't what the card doctor wanted, he looked over the flats and found that some were high and others low. The grinder straightened this out with the mill's flat grinding machine. Still there were neps in the web.

The grinder then revealed that he had been grinding the doffers without removing the large doffer gear. An inspection showed that the doffer journal was cut away on one side. This was remedied but still the work was not satisfactory to the card doctor.

He investigated every clue by checking the condition of the feed roll bearings, licker-in journals, and duplex journals. Then he discovered that a quarter round was taken from the sides of the card and he told the grinder to set it correctly because that would affect the air draft. The plate was filled up in the

back, too, and it was rubbing against the doffer all the time. When the sand plate was polished and the cross member cleaned the doctor noticed some flakes still in the web. He had the fixer remove the front door and straighten the lip so that it would not suck strips back in to be delivered to the doffer.

(Another installment of The Old Card Doctor's Investigations will be presented in a later issue.)

CONTRIBUTOR No. 6561

A Cotton Buyer Discusses His Job

EDITOR COTTON:

I have read with a great deal of interest, the article on page 95 of the June COTTON entitled "A Superintendent Discusses Cotton Buying" by "CONTRIBUTOR No. 6490". As I happen to be a cotton buyer and classer for a fairly large mill, perhaps a few remarks concerning my own experiences would be in line by way of an answer to this mill superintendent's letter.

He points out that the cotton buyer usually has other duties to perform and does not have the time he should to devote to his job. This is probably true of smaller mills, but in the larger mills they do not have duties other than that of buying cotton and still very often they do not have time enough to properly perform their jobs. This is particularly true of mills that do local buying of several thousand bales as is our case.

The buying of cotton "so many points off" results in getting inferior cotton. This fault should be laid directly at the feet of the mill president or the executive that is in charge of the buyer. The buyer should be told just what grades and staples to get and then his supervisor should hold him to strict account. If the mill does not have a receiver to check up on the buyer and see that the correct grades are purchased, then it is my opinion that it doesn't deserve to get them. It is a well known fact that some mills keep a much closer check on their machinery supplies than they do on their cotton, whereas the investment in a supply of cotton lasting two weeks may be more than the expenditures on supplies for a year.

We are careful to avoid running a lot of green cotton in the mill at one time at the beginning of each season. If the new cotton is too green we will not get in the market but will wait until it has become better. After we have begun to buy the new cotton, we inform our overseers of carding and spinning that we will begin to run some of this cotton on a certain date and also let them know if the cotton is greener than usual. We then decide what amounts of the green cotton we will run at a time. This usually amounts to only about five per cent for one week, then we step it up to 10 or 15 per cent for another week, and then on up to 25 per cent and so on until we are running about 50 per cent green cotton. By this time the crop is fairly well dried and the mill is in shape to run all new cotton if it is necessary. We also discuss with these two men the running of compressed cotton and Western cotton when it is necessary to make a change, and a report is given the overseer of carding and superintendent every day showing the number of bales of each grade and staple placed in the opening room.

As to the cotton buyer spending time with the superintendent, as "CONTRIBUTOR No. 6490" suggests, I think that is an excellent idea. There is not a day passes that I do not see our superintendent and at least once or twice a week I look at the reports showing the breaking strength of yarns; I also ask the overseers how the work is running. Along these lines, however, I would like to say that it would be a good idea to include the president in any discussions to be had between the buyer and the superintendent because he is the man that finances the purchases of cotton and often it may be a result of some order of his that the mill is not getting the kind of cotton the superintendent thinks he should have. In this case, the cotton buyer usually shoulders the blame when, as a matter of fact, he is innocent.

One other thing I would like to mention to the superintendent. He should not, under any circumstances, have a mechanic, yard man, or some other man with another job do the cotton receiving. This work is highly technical and requires far more training than it does to become a shop mechanic. If the cotton receiver has spare time after his work is finished, it is all right for him to do something else, but cotton should be his first job always. It represents more money than anything else the mill buys, and if it goes wrong, everything else goes wrong.

CONTRIBUTOR No. 6560

A Method of Handling Cotton Accounts

EDITOR COTTON:

This is in reply to a question by "CONTRIBUTOR No. 6559" that appeared on page 87 of the August issue of COTTON relative to the method of keeping cotton accounts straight and the detail work in handling the accounts.

We do not use a separate cotton office and bank account as outlined in his question, but all cotton purchases are handled along with other purchases through regular channels and are paid for out of our general bank account.

As to our warehouse records, they are kept in detail similar to the records used by bonded warehouses. Each separate bale is numbered, and together with the weight is entered in numerical order in a cotton book. The cotton is stacked in the warehouse according to grade so that each grade is kept at all times to itself. Therefore, when it is necessary to sell cotton, all we have to do is to go to the warehouse and take the required number of bales out of the respective grades and turn in the warehouse ticket, which contains the bale number, through the office where each bale is checked off the register. Cotton used daily in the mill is checked off in a similar manner so that at all times we maintain a perpetual inventory record of the cotton on storage. At frequent intervals the cotton is counted to see that it agrees with the records.

This procedure is simple but it requires considerable detail work. However, we can tell at all times the exact standing of our cotton account.

I see no reason why a larger mill cannot use the

same system to advantage. The only difference in their case would be that they would have to maintain a separate account for each separate warehouse.

"CONTRIBUTOR No. 6559" mentions that cotton is received from three different sources. In our case we may receive cotton from a dozen different sources in the same month. The source of receipt should not complicate it in the least if the proper receiving records are kept. A complete record of each bale of cotton received should be made so that it may be accounted for when used in the mill or sold. I know of no other way to keep cotton accounts straight, and since it is a liquid asset, readily convertible into cash, it should be handled with the same care as one ordinarily exercises in the handling of cash.

CONTRIBUTOR No. 6565

Research In Mills

Presented here is the experience of one mill man who is now developing his research department. He firmly believes that research is the patron of progress. Unselfishly he passes to the readers of Cotton his findings in the field of research for research. Although this is only a simple example of test work in the plant, it shows the savings that may be realized by the expenditure of a small sum for tests, experiments, and research.

RECENTLY I attended one of the textile meetings and it brought to my attention the fact that many of the mills and the operating executives are not keeping up with the march of time. The questions discussed at this meeting pertained to research, yet out of the 100-odd men attending, only about 10 could give any experiences with modern testing equipment. It is a known fact that the larger organizations such as Pacific Mills, West Point Manufacturing Company, Callaway Mills, Erwin Cotton Mills, and Bibb Manufacturing Company, are undertaking much research work, but most of the smaller, unit plants are ignoring research and have little testing equipment.

Consequently the larger companies that do take the research work seriously are getting the jump on the small fellow. Someone may say that "we can't afford to buy testing equipment and hire a man to do our research work". The initial cost alone should not be considered, but the production, cost, and quality over a period of years should be. If there isn't a return on the investment, why are the large companies doing so much research?

Here I do not mean to imply that we men in cotton mills should experiment in machinery, for that is for the machinery builders, but we should experiment in manufacturing details. For example, I have in mind a mill that has good running work, a comparatively good cost sheet, and modern equipment; the executives felt that they were getting a good job of manufacturing and that the superintendent was okay. He had come up in the old school of experience and hard work. Someone could ask him how his weaving was running and he would say it was running well but he could not say exactly how many loom stops he had per hour, except from observation, and then he would say they were pretty low. He had made no tests in the weave room on loom stoppage for some time.

Recently he put a man on to do test work and he had this fellow to make some loom stoppage tests. Upon completion of the test the man showed him what he had found. (See accompanying illustration.)

After examining the test figures the superintendent immediately saw that his stoppage was higher than it should be so he began to study the causes for it. He noticed that "kinks" were causing 12 per cent of the stoppage and immediately went to the winder room to see if he could locate the cause for so many kinks.

The test man found that the kinks had a knot just a short distance from them and reported this fact to

N° OF LOOM	WEAK THREAD IN BODY	WEAK THREAD IN SELVAGE	LOOSE ENDS IN BODY	LOOSE ENDS IN SELVAGE	LINT ON YARN	WINDER AND WARPER KNOTS	KINKS IN WARP	GOUTS	SLIP KNOTS	MAT UP	WILD YARN	BROKEN FILLING	LOOM REPAIRS	CLOTH DOFFING	LOOM CLEANING	SLACK ENDS IN BODY	SLACK ENDS IN SELVAGE	UNCLASSIFIED STOPS
1114	II		I		I		II	I										
20								I										
21	I		II			I		I										
22	III				II	I	I	II										
23																		
24																		
25					II			II										
26	I						I	II										
27						I	I											
28	II				I		III	II										
29							I	I										
30	I																	
31						I		II	I							I		
32	I		III					II								I		
33						II		II						I				
34					I			II		I								
35	I							III						I				
36							I	I			I							
37						I		II						I				
38	II																	
39					II	I		I										
40						I	I	III		I				I				
41	I							I										
42							I	II	I	I								
43							I											
44	II				I	I		III										
45					I	I												
46	I						I			II								
47	II			I		I	I	III					II	I				
48	II				I		I	I				I						
49	I						II	II						I	I		I	
50							I			I								
51					I	I												
52	I							II	I	I								
53	I							III			I							
54	II							I										
TOTAL	27	0	6	1	13	13	19	61	3	7	2	0	3	6	1	2	0	1

DATE 12-8-36

MISCELLANEOUS INFORMATION

STYLE 64X60
WARP N° 30s
FILL N° 40s
N° OF LOOMS 36
HOURS RUN 6
LOOM HOURS 216
TOTAL STOPS 155
STOPS PER LOOM PER HOUR 0.72
PICKS PER MINUTE 170
TIME TEST MADE 1:00 P.M. to 5:00 P.M.
7:00 P.M. to 9:00 P.M.

REMARKS ABOUT WEATHER CLOUDY
ATMOSPHERE VERY DAMP
HUMIDITY READINGS
WET BULB 79-84
DRY BULB 83-88
RELATIVE HUMIDITY 84-85

An example of a test run using the loom stoppage report . . .

the superintendent. The superintendent noticed that when the winder operatives were starting the cones that they did not give the cones a little roll so as to take up the slack in the thread before putting the cone on the driving roll. From his observations he found that by correcting this fault that he could eliminate most of the loom stoppages that were due to the kinks. He explained to the overseer of winding what could be done to eliminate the kinks who in turn showed his operatives what they were doing wrong.

He next found that gouts were causing practically 33 per cent of the loom stoppage. Getting to the bottom of this cause for loom stops he had all of his overseers in the office and showed them the test, asking them to make a study of this problem in order to reduce the number of gouts in the yarn. Gouts, as we all know, are made in every department of the mill through carelessness on the part of the operatives.

This one test opened the eyes of the superintendent and he saw how much stronger he could talk to his overseers when he could show them in black and white just what he was talking about. In other words, he did not have to say, "Mr. Spinner, I *think* you are making too many gouts," or, "Mr. Winder, I *think* your winder hands are making kinks," but by tests and their findings he knows what he is saying and can prove it. As a result of these first few important tests the superintendent is having his test man run tests in every department. And the test man is earning a return on the company's money invested in him.

The sooner we start our research work the sooner we are going to run our jobs more efficiently.

CONTRIBUTOR NO. 6602

Production Records of Individual Looms

These individual loom production records plot the point of inefficiency . . . . . .

"A friend of mine from Alabama was over to see me the other day, and was telling me about a plan he has installed for checking the efficiency of every individual loom in his mill. As he pointed out, one or two looms that are greatly below normal will pull the efficiency of a whole section away down, and he finds that by ferreting out the worst offenders, and getting them fixed right away, he can raise the percentage of the whole room. The idea sounds good to me. Why don't you get the details?"

The speaker was a Georgia mill agent.

We got the whole story, and present it below for him—and for you. In addition to the point mentioned, the plan seems to give a check on the loom, the weaver, the fixer, the second hand, and the overseer. What do you think of it?—THE EDITOR.

EDITOR COTTON:

We have found that by keeping daily production records of each loom in the mill that we are able to ascertain quickly just where the deficiency lies when production falls below normal. By this method, we don't have to speak in general terms to our overseers but can place our finger on one spot and say "here is the trouble—correct it".

For 100 per cent efficiency we use the standard speeds recommended by the builders of the looms. Each morning we have a report placed on our files in the office which shows the picks made by each loom for both of the 8-hour shifts of the previous day. As we have already set up our 100 per cent production tables, we figure on a fixed percentage deadline and when the picks made by any loom are below that deadline, we place a mark opposite the number of the loom for that shift. We watch each individual loom record and when we have a loom that shows low for 5 times, we send to the overseer a list of the looms in his department that are operating at low production. The overseer checks each of the low production looms and advises the office why the production was not up to par.

We think we get some benefit from this program because loom fixers do not like to have the looms on their sections produce low because of mechanical conditions, nor do the weavers care to have their looms register low production. Everyone knows that these records are permanent and they strive to keep them so that they may be justly proud of them.

In addition to carrying the record of the looms, we also carry a record of the production of each individual weaver; this is also permanent. When a weaver produces below a fixed percentage, we call it to the attention of the weaver's overseer and ask him to see why that weaver has low production. Sometimes we find that a little program of educating a weaver and getting better co-operation between the weaver and loom fixer will change a low producing weaver into a good weaver.

The overseer ascertains why the loom has been stopped and notifies the office on this form . .

DATE_____

LOOM Nº	TIME LOST	WHY STOPPED

Seconds made by each weaver for the week are made a part of the record, but we figure the percentage of seconds on the basis of the particular weave, grading as to requirements and not as just a flat figure.

We have looms that produce low and we ask no questions because each weaver has a pad on which are listed some of the most common causes for a loom to stop or run badly. The weaver checks these causes when the loom stops, and if the reasons for low production are shown by the weaver, we know that the loom is having necessary attention and pass it along as being in the class of "low producer, cause known and correction being made". The weaver gives the report to the timekeeper who makes a copy for the overseer and sends the original to the office.

By keeping both an individual loom record and an individual weaver record, we can usually determine very easily whether or not there is mechanical trouble

	PICKS	PER CENT	CAUSE OF STOP		PICKS	PER CENT	CAUSE OF STOP
1401				1451			
1402				1452			
1403				1453			
1404				1454			
1405				1455			
1406				1456			
1407				1457			
1408				1458			
1409				1459			
1410				1460			
1411				1461			
1412				1462			
1413							
1414							
1447							
1448							
1449							
1450							

This report shows the production of each loom. If the loom has been stopped for some time the cause of the stop should be noted.

or weaver trouble. If the trouble is mechanical then the fixer should be aided and if the weaver is not efficient then he should be trained. Sometimes it is necessary to change a weaver from one construction to another. However, before firing a weaver, we make an effort to help him by putting a good weaver with him for a short time to show him ways of preventing or at least overcoming a part of the difficulties; many times, if the weaver will call the loom fixer in time, production can be gained.

We are working on the theory that it is better for the mill and the operative that we know why the production is not up to par. It is also better to educate the help on the job than to be continually firing and hiring. If we know the why then we know who needs coaching. It may be the loom fixer; it may be the weaver; it may be in the slashing, drawing-in, or tying-in; it may be one or several of many different things.

We try to find the causes for defects and then correct them, keeping them corrected once adjustments are made. This will, we believe, place the responsibility where it properly belongs, and will at least establish a record of the value of each particular person connected with that operation.

Production of Each Loom

In addition to carrying the record on each weaver and each loom, we also carry along on the same sheet with the individual weavers the record showing the average production on the loom fixer's individual section. By the record of the individual weavers we can see which weaver is pulling the record down, or if it is a general low weaver section. If one individual weaver is low, it may be the weaver's fault, but if the total number of weavers runs low then it may be the loom fixer's fault. In either case, the overseer will know the corrections to make.

On this same sheet we show the average room production for each shift so that we may know the rating of the second-hand on each shift. At the top of the sheet we show the general average of the room for the entire day—this is for the overseer's record.

From this sheet we can see at a glance the general percentage of production in the room for the day, the percentage for each shift, for each section, and for each individual weaver. This information, coupled

DAILY PRODUCTION REPORT DATE_____

GENERAL AVERAGE (Overseer's Record) %

FIRST SHIFT GENERAL AVG.____% (Second Hand's Record)

FIRST SHIFT GENERAL AVG.____% (Second Hand's Record)

ROOM #1 FIRST SHIFT AVG.____%

ROOM #1 SECOND SHIFT AVG.____%

SECTIONS	WEAVERS	PER CENT	SECTIONS	WEAVERS	PER CENT
1 (Second Hand's Record)	(Weaver's Record)		1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		

Composite daily production report

with the individual loom record, the cause for stoppage record, and the weekly percentage of seconds by each weaver record, gives us a pretty clear picture of the actual conditions in each of our weave rooms.

CONTRIBUTOR No. 6582

"Wash" Asks, "Does It Pay to Have A Research Department?"

"Wash" makes some pretty strong comments here concerning the research department. Are you fellows going to let him go unscathed? . . . .

EDITOR COTTON:

Does it pay any cotton mill to have a textile research department?

I have found that few men doing research work are practical, so we should add another department known as the "practical department" whose job will be to lead the research men to the machines in the cotton mill so that they may find the cause of the defects found in their research work.

We are told by these scientific fellows that the maximum breaking strength of yarn broken in a skein can be obtained with a twist multiple of approximately 4.30, varying slightly with the type cotton used. Again, we are told that the maximum breaking strength of a single strand is obtained with a twist multiple of approximately 5.25. But we are not told which of the two twist multiples gives the maximum breaking strength in the cloth.

Another smart fellow in England discovered in his research work that the breaking strength of the warp increases with the addition of picks, up to a certain point, and then with the addition of only 6 picks, the breaking strength fell of 10 pounds. Think of that.

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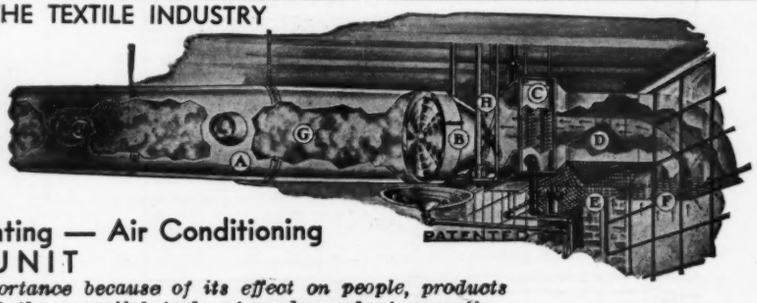

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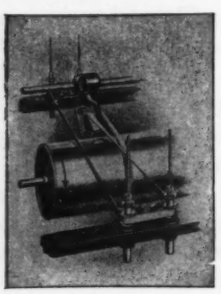

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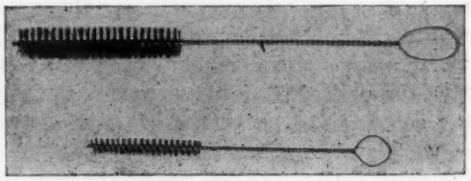

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Should one of these research men be asked the number of blows to the inch stock receives in the picking process or if the draft is excessive, he could not answer, and I need not state what a whale of a difference in the breaking strength of the yarn an excessive draft, or in other words, excessive blows per inch on the picker will make. Notice the statement "varying slightly with the type cotton used", which is a confession that the researchers are not practical. What about the defective bottom cones that are found running in many of our cotton mills, and what about the different speeds that are adopted, causing racking, and what about the improper spacing of the drawing rolls, and what about excessive drafts?

These factors weaken the yarn.

In my opinion, a good carder has all of these research fellows beat a mile because he knows the character of the stock, how to work it, and is able to locate the ports of trouble.

Let us first consider carded yarn only. No reader of this department will dispute that the number of blows per inch in the picker makes a vast difference in the breaking strength of the yarn, and that the draft between the drawing rolls and the calender rolls on the drawing frames will do the same. (The less draft at this point, the stronger the yarn.) Are these factors considered by the researchers? No!

A good comber man will tell us that decreasing the weight on the front delivering roll, on a certain stock, will increase the breaking strength—but has this been considered by the researchers?

On fly frames, just think of the vagaries found in the action of the cone belt, of the many defects the bobbin-lead system is heir to, of the weak yarn produced by racking, etc. These things will enter the mind of the practical man when he discovers that his yarn is growing weaker, but the researcher will not think of them.

The same may be said of the roving tester; it is a device that will show the defects in the roving, speaking in a whisper, but like the research worker, it is unable to point out the source of the defects found.

So, what do you think, does it pay a mill to have a textile research department?

Opinions on this question should be weighed avoirdupois.

WASH (R. I.)

High Whip Roll Causes More Seconds

There are some who will not agree—let us have your opinion . . . . . .

EDITOR COTTON:

The setting of the whip roller, though not much discussed, is of great importance to good weaving. A high whip roller causes more seconds because there is more end breakage. This is caused, as most everyone familiar with the loom knows, by not having the same tension on the warp ends when the harness are open.

When the loom is not in good mechanical condition a high whip roller sometimes causes the shuttle to fly out or run crooked, causes overshots, and sometimes causes a bad appearance in the cloth.

High Whip Roll Made Bad Cloth

Only a short time ago one of my fellow fixers came over on my section and asked me to fix a loom for him. He said he would run my job while I worked on this loom for him. This loom had been making bad cloth for some time; the weaver had flagged it several times. The foreman had put his name on it two times and this meant that it must be fixed. This cloth had a wavy, bad appearance due to the whip roller being too high, its height causing the shuttle to lay the filling in the warp a little wavy and in the beating up motion this caused a bad appearance. The loose top shed permitted the warp ends to be beat up where there was the least resistance, causing a little opening due to the warp end not being uniform in length. By lowering the whip roller I entirely eliminated this trouble.

I mention this to show how such things will get by some fixers.

The height of the whip roller depends on the kind of cloth being woven, the kind of cotton being used, and the reed (whether coarse or fine and the number of dents per inch).

The running of the work and the appearance of the cloth can be improved by having the whip roller and all of its moving parts in good condition.

The sand roller should be lined and paralleled with the breast beam. The crank arms should be the same length so the cloth will be beat up straight.

The rocker shaft and bearings should be in good condition. One bearing should never be allowed to wear down lower than the other. The harness should be set level with the race board. The pick should be set so as to pick on top center. This, with the proper timing of the harness, will help to eliminate slack selvages and ends breaking in the selvages.

Set Whip Rolls Alike on Same Constructions

The distance from the back of reed to whip roller should be the same. The distance from the whip roller to the beam bearing the same.

By measuring the things I have mentioned many will be found to be ¼ to ¾-inch off. If the distance from beam bearing to whip roller and from whip roller to the reed are found to be off ½-inch, the warp will have more strain on one side.

The beam bearings, whip roller, crank arms, and sand roll will wear down and cause lots of trouble and still go unnoticed.

Am sending a sample of cloth woven on a loom with the conditions mentioned and also a sample of cloth woven on a loom in better condition. Both have the same counts warp and filling.

CONTRIBUTOR NO. 6604

(Editor's Note: The samples of cloth submitted for examination are not suitable for reproduction, but there is a marked difference in the appearance of the cloth woven with the high whip roll and the lower whip roll.)

GOLDENS' V-BELT SHEAVES

LICENSED BY ALLIS-CHALMERS UNDER GEIST PATENT NO. 1,662,511

The High Quality of our V-Belt Sheaves is due to:

1. A selection from extensive pattern equipment to insure well designed Sheaves, both as to appearance, and for relief of excessive internal strain.
2. A use of proper mixture of iron to insure high strength in the Sheaves, and a smooth close-grained surface for belt contact.
3. An accuracy in machining to insure correct dimension of finished surfaces, including grooves carefully turned for whatever make of Licensed V-Belt is to be used.

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ALSO MANUFACTURERS OF:

Hangers
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Ball Bearing Blower and Fan Boxes
Size Kettles
Continuous Dyeing Machines
Raw Stock Dyeing Machines
Dye Liquor Tanks
Cast Iron Tanks
Cloth Inspecting Machines

"Collective Bargaining"

National Foremen's Institute, 60 East 42nd St., New York City, has published a book, *Collective Bargaining*, by R. D. Bundy. Collective bargaining is frequently thought of as an issue which has suddenly been forced upon management, and emotional reactions are the natural result. On such a level, the problem becomes difficult to solve and force instead of reason is resorted to. The purpose of *Collective Bargaining* is to approach the subject in an objective manner, to look at it as a problem which is facing management and workers for solution, to consider it as the resultant of those forces which have played upon the workman for years, to analyze it with the view of making necessary adjustments, and to suggest a procedure for eliminating the causes which have brought it about. The book sells for $1.00 in the cloth bound volume.

Japan Supplants United States as World's Largest Rayon Producer

Japan moved into first place among the ranks of the world's largest rayon producers during 1936, gaining this position for the first time in the history of the rayon industry according to figures compiled by the Textile Economics Bureau, Inc., and contained in the current issue of the *Rayon Organon*, published by that institution.

Through its speeding up of production in 1936, according to the *Organon's* records, Japan takes from the United States the record of the world's largest producer, a record which this country has held consistently since 1915. Prior to that time, when the rayon industry was in the stage of infancy, Great Britain was the world's largest producer, excluding the experimental years from 1890 to 1912, when France was the chief producer.

Giblin to Teach Night Course on Analysis of Textiles

James L. Giblin, engineer in charge of the New York laboratories of the United States Testing Company, Inc., will conduct a class during the evenings dealing with the identification, analysis, and testing of textiles at the University Extension of Columbia University, New York City. The course is designed to supplement the manufacturing courses on cotton, wool, silk, and rayon. It is not an advanced course in testing procedures and should be of interest and benefit to salesmen, retailers, buyers, wholesalers, and the textile trade in general. It will cover all fibers, yarns, and fabrics, also finished merchandise.

Portable Pyrometer

The Bristol Company, Waterbury, Conn., has developed a new millivoltmeter-type portable indicating pyrometer for measuring temperatures up to 3000 degrees F., using a thermocouple and extension leads. The use of a cobalt magnet allows exceptional design features including increased sensitivity and a widened scale for more accurate readings. The high-resistance millivoltmeter movement is double-pivoted and completely shielded to prevent the effects of stray fields. The instrument is available in single and in double ranges. It is especially adapted for industrial use.

Willard, Graton & Knight Head Passes May 25

Frank H. Willard, president of Graton & Knight Company, Worcester, Mass., succumbed to an attack of the heart May 25 in the hospital, where he had undergone an operation a few days previous. He had been suffering from a coronary occlusion for more than a year, but was apparently well on the road to recovery since his operation. He was 71 years old. Mr. Willard rose from errand boy to head of the company, having only worked for the one company during his life. He was recognized as a great civic leader, and had many friends throughout the industries.

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Advertisers in this Issue Offer You . . . . . .

204. Modern Shipping Boxes — Illustrating the modern tendency in interior construction and exterior design, this booklet shows how shipping boxes can be made outwardly colorful and attractive. Hinde & Dauch Paper Co., Sandusky, Ohio.

205. The Walker Method—8 page illustrated catalog describing the Walker method of quickly checking the efficiency of machinery. This improved method eliminates the losses resulting from improperly adjusted equipment. Walker Electrical Company, 936 Means St., Atlanta, Ga.

208. Cool Your Mill With Its Own Heat!—A ten page booklet which tells the story of the Parks Automatic Airchanger—a patented combination of forced air-change and direct humidification in balance—all under control of automatic humidity regulators. Ask for Bulletin 1135. Parks-Cramer Co., Fitchburg, Mass., and Charlotte, N. C.

209. Are You Being Kidded About Automatic Humidity Regulation—a direct comparison of the sensitivity, accuracy and reliability of a hygroscopic type of humidity regulator and the Park Spray Psychrostat—the first and only regulator to work on the psychrometric principle. Ask for Bulletin 835. Parks-Cramer Co., Fitchburg, Mass., and Charlotte, North Carolina.

213. Saco-Lowell Cotton Machinery—Twisting—a 36 page illustrated brochure explaining the company's twisters and parts, including the four basic type twisters, features of new construction and general notes on twisting. Production calculations and specifications are included. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

214. Saco-Lowell Cotton Machinery—Spinning—the second edition of a 56-page booklet, illustrated with the company's product and containing valuable charts, production tables and other spinning data. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

215. What Happens When You Ship a Package?—16 page illustrated booklet outlining the particular value of railway express and air express service and giving all details concerning pick-up, transportation and delivery. Railway Express Agency, Inc., 230 Park Ave., New York, N. Y.

216. Cutting Costs with Liquid Caustic Soda—a 72 page hand book packed full of useful information on liquid caustic soda, including unloading and handling properties of caustic soda and its equeous solutions, sampling and analysis. Of practical value to executives, buyers, chemists and operating men. Sent without obligation by writing on your business letterhead to the Mathieson Alkali Works, 60 East 42nd St., New York, N. Y.

217. Diamond Fibre Hollow Ware—32 page booklet and catalog, attractively illustrated, showing various types of boxes, trucks, cans, barrels, baskets and trays of Diamond Fibre Hollow Ware. Of interest to every mill man in solving material handling problems. Free on request. Continental Diamond Fibre Co., Dept. C, Wilmington, Delaware.

218. Butterworth Electric Guiders—6-page folder describing and illustrating the new Butterworth Electric Cloth Guider. This guider is built on the same principle as the Foxwell Air Guider and is unexcelled for fast, accurate guiding. H. W. Butterworth & Sons Co., Philadelphia, Pa.

219. My Strap-Book by Doc Steelstrap—16 page illustrated catalog describing the hundreds of ways that Acme steel strap can be used to advantage in connection with paper boxes and wraps in making safe, economical shipping packages. The strap-book will convince you that Doc Steelstrap and his assistants do a thorough job of the packing and shipping business. Acme Steel Co., Chicago, Ill.

222. "Onyx Processing and Finishing Compounds"—A new 56 page catalog describing the entire line of processing and finishing compounds and covering every process on all types of fabrics. Also included is a comprehensive article on the subject, "The Importance of Accurate pH Control." Onyx Oil and Chemical Company, 15 Exchange Place, Jersey City, New Jersey.

223. Alloyed Iron in Southern Industrial Fields—16 page illustrated catalog dealing with the properties available in modern cast irons. International Nickel Co., 67 Wall St., New York, N. Y.

224. "Tank Talk"—Sixteen page booklet of illustrations showing various types of elevated steel tanks, constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said. R. D. Cole Manufacturing Company, Newnan, Georgia.

225. Houghto-Size AC — Showing characteristics a warp sizing compound must have for modern rayon fabrics, weakness of former sizes and the unusual advantages of Houghto-Size AC. E. F. Houghton & Co., 240 West Somerset St., Philadelphia, Pa.

227. Stainless Steel Valves and Pipe Fittings—complete illustrated catalog, together with price list, covering stainless steel valves and pipe fittings, giving all dimensional data, etc. The Cooper Alloy Foundry Co., 150 Broadway, Elizabeth, N. J.

228. Solutions for Your Problems—20-page illustrated booklet containing valuable information on the scouring and processing of wool and other fibres. Detergent Products Corp., Atlanta, Ga.

230. How to Profit With Air Express—attractive folder pointing out the advantages of air-rail express. Giving rates and time tables, this folder should be in the possession of every textile manufacturer. Railway Express Agency, Inc., New York, New York.

231. Spindle Tape Lacing Equipment — Illustrated folder describing the new Clipper spinning tape lacing equipment, gives vibration chart, prices, specifications and other valuable information. Clipper Belt Lacer Co., Grand Rapids, Mich.

232. Condenser Tape Lacing Equipment—Describing in detail the new Clipper condenser tape lacing equipment, this folder contains table of decimal equivalents, prices, specifications and illustrations of the lacer, hooks and cutter. Clipper Belt Lacer Co., Grand Rapids, Mich.

233. Catalog No. 22—an attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use. Meese, Inc., Madison, Ind.

234. They Stay Brighter Longer—This interesting illustrated booklet containing facts about Mazda lamps will be sent you free on request. General Electric Company, Dept. 166, Nela Park, Cleveland, Ohio.

235. The Guide—a ready reference book which will prove of great help to textile mill engineers in selecting Valves, Boiler Mountings and Lubricating Devices. Products are grouped by pressure, type and use. The Lunkenheimer Co., Cincinnati, Ohio.

236. Lunkenheimer Catalog—describing and listing the entire Lunkenheimer line of Valves, Water Columns, Water Gauges, Gauge Cocks, Fittings, Unions, Air Nozzles, Lubricators, Oil and Grease Cups, etc. The Lunkenheimer Co., Cincinnati, Ohio.

237. The New Boyce "Rayon" Knotter—This new knotter increases production, eliminates perspiration and body chemical stains and makes clean, uniform knots. Over 2,000 of these new knotters are now in use. Mill Devices Company, Gastonia, N. C.

238. Glorified Light—a 32-page booklet illustrative of the vital part proper painting plays in scientific lighting and in the reduction of maintenance and producton costs. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

239. Precision Electric Portable Grease Gun—a 4-page illustrated folder describing the new grease gun for textile use. Finger tip control. Safe and easy to handle. Battery powered with three-year guaranteed battery. Recharger built in. Saves time and labor. Precision Gear & Machine Co., Charlotte, North Carolina.

240. The New Proctor Automatic Yarn Dryer—6 page illustrated folder describing the new Proctor automatic yarn dryer which has the exclusive new Proctor traveling skein protector. Proctor & Schwartz, Inc., Philadelphia, Pa.

241. Handbook of Building Maintenance—38 page illustrated booklet which is a ready reference for men responsible for the maintenance of textile buildings and structures. Should be on file in engineer's office. Flexrock Co., Philadelphia, Pa.

244. Turbine Pumps—as used for irrigation and all municipal and industrial purposes. A forty-page illustrated and descriptive bulletin furnished free by Pomona Pump Co., Pomona, Calif., or 4301-7 So. Spring Ave., St. Louis, Mo.

245. Design Wheels for Brinton Knitting Machines—16 page illustrated booklet which gives helpful information on design wheels for Brinton knitting machines. A copy of this booklet should be in the hands of every knitter. H. Brinton Co., Philadelphia, Pa.

246. Randall Pillow Blocks—A convenient 24 page pocket size catalog giving detailed information on types, sizes, uses, construction and prices. Randall Graphite Products Corporation, Chicago, Ill.

247. Randall Graphite Bronze Bearings—A handy 24 page pocket size catalog listing the complete range of Randall bushings. The inside diameter is thumb indexed for convenience. Randall Graphite Products Corporation, Chicago, Ill.

248. Reeds, Positive Expansion Combs and Reed Supplies—6-page pamphlet describing various types of reeds, spring and positive expansion combs for warpers, beamers and slashers, the Scotch Hook Reed, crossing reeds, and various supplies used in connection with working on reeds. Greensboro Loom Reed Company, Greensboro, N. C.

249. Wood Decay—Its Causes and Prevention—4 page illustrated folder describing the causes of wood decay and methods of prevention. Reilly Tar & Chemical Corporation, Indianapolis, Ind.

250. Termites—This valuable booklet which deals with the destructiveness of the termite and the methods of extermination should be in the hands of every textile mill man. Reilly Tar & Chemical Corporation, Indianapolis, Ind.

251. Brown Thermometers and Pressure Gauges—New 71 page book illustrating and describing the Brown indicating, recording and controlling thermometers and gauges. Explaining their many advantages to the textile plant, this valuable book should be in the possession of every mill executive and department head. The Brown Instrument Co., Philadelphia, Pa.

253. Brown Air-O-Line Controllers—This booklet will prove invaluable to the men in charge of dyeing, finishing and slashing, as well as the textile executive. 32 illustrated pages describing the various Brown Controllers. The Brown Instrument Co., Philadelphia, Pa.

254. Fade-Ometer—A laboratory testing device for determining the color fastness or fastness to light, of dyes and dyed textiles. Fully described in a 22-page bulletin containing complete color test data. Atlast Electric Devices Co., 387 West Superior St., Chicago, Ill.

255. Launder-Ometer—A laboratory testing device for determining fading, shrinking, staining and mechanical action of dyed textiles due to laundering, also detergent tests, dry cleaning tests, vat and sulphur dye tests. Completely described in 16-page bulletin. Atlas Electric Devices Company, Chicago, Illinois.

256. Self-Cleaning Textile Motors—4-page illustrated folder describing the pioneer Self-Cleaning Textile Motor designed exclusively for the Textile industry. The Louis Allis Company, Milwaukee, Wisconsin.

257. Loom Motors—This 4-page folder describes the Louis Allis Loom Motor, which is designed and built from the ground up as a sturdy, smooth, powerful motor necessary for successful performance with modern high-speed looms. The Louis Allis Company, Milwaukee, Wisc.

258. Automatic Overhead Cleaner for Spinning, Winding, Warping and Twisting—24 page booklet showing the new American MonoRail Automatic Cleaner in operation on MonoRail track circuit over Spinning, Warping, Winding, Twisting, etc. This cleaner incorporates a new scientifically designed blower producing a whirling column of air directed and controlled so that it prevents accumulation of fly with no harm to roving. The American MonoRail Company, Cleveland, Ohio.

259. Cotton Conditioning with Texspray Compound—18 page booklet describing the Texspray method of cotton conditioning. It has been proven that this method will save money, increase production, increase flexibility of fibre, eliminate static and reduce fly and dust. The Texas Company, New York, N. Y.

260—Lubrication—This attractive booklet contains valuable and interesting articles on loom lubrication and also on spinning design and the function of spindle oils. The Texas Company, New York, N. Y.

261. The Brown Moist-O-Graph—16 page bulletin describing the Brown Moist-O-Graph which measures, records and controls the moisture content of cotton warp yarns. The Brown Instrument Company, Philadelphia, Pa.

262. Maintenance Paints and Cleaners—16 page illustrated catalog describing complete line of paint and surface maintenance products for industrial use. Full coverage and application data given. Handy application chart shows proper products for each surface and condition. The Skybryte Co., Cleveland, Ohio.

263. Gastonia Brushes—New catalog and price list showing the complete line of brushes for the textile mill. Gastonia Brush Co., Gastonia, N. C.

264. American Pressed Steel Trucks—16 page illustrated catalog describing the American line of trucks and industrial truck wheels. American Pulley Co., Philadelphia, Pa.

265. American Tension Control Motor Base—Illustrated and describes the new tension control motor base and explains its many distinct advantages. Complete with charts and tables. American Pulley Co., Philadelphia, Pa.

266. Energy Drive—The Latest Improvement in the Art of Weaving—7-page illustrated booklet describing the sensational new energy drive for looms. Complete with specifications and actual installation results. Power Transmission Council, Inc., Boston, Massachusetts.

267. Monitor Catalog—This catalog not only contains illustrations and descriptions of standard controllers, starters and accessories but also useful tables and engineering data. Monitor Controller Co., Baltimore, Md.

11. Whitinsville Rings—16 page illustrated booklet describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville Spinning Ring Co., Whitinsville, Mass.

25. "Lupogum" and "Monopole Oil"—Two booklets on textile sizing and finishing products. Jacques Wolf & Company, Passaic, N. J.

29. Continuous Card Stripper—A 20 page booklet describing in detail continuous card strippers, their advantages, the power required to operate, etc. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

30. Lubrication of Textile Machinery—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York & New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

38. Sleaziness in Full Fashioned Knitting—Illustrated survey with samples of fabric showing causes of sleaziness and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog for Reading full fashioned machines with general information on subject of full fashioned knitting.)

55. Interpretation of Analysis for the Layman—An eight page booklet explaining what the various items used in fatty oil and sulfonated oil analysis mean, enabling the ordinary textile man without chemical education to interpret the various chemical analyses. National Oil Products Co., Harrison, N. J.

62. Rubber Products for the Textile Industry—A 40 page booklet giving a wealth of information on the proper selection, installation and operation of rubber belts, together with charts, showing horsepower rating, pulley sizes, V-belt sizes, also information on all types of hose and rubber covered rolls used in the textile industry. Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J.

64. SKF in the Cotton Mills—A twelve page booklet showing the advantages in power consumption, increased production, savings in lubrication, increased yarn breakage strength to be secured through roller bearing spindles. SKF Industries, Inc., Front St. and Erie Ave., Philadelphia, Pa.

65. Bulletin No. 500. Cooper-Hewitt Industrial Illumination—booklet explaining in detail the importance of good lighting and the necessity of proper quality as well as proper quantity of light. General Electric Vapor Lamp Co., Hoboken, N. J.

CONTINUED ON NEXT PAGE

HELPFUL BOOKLETS FREE...

Continued from Page 99

66. Dronsfield's Patent Portable Auto-Feed Needle Point Grinder No. 176—describing a new departure in card grinding—John Hetherington & Sons, Inc., 250 Devonshire St., Boston, Mass.

69. Monel Metal Equipment for the Textile Industry—A 50 page buyers' guide and catalog with more than 100 illustrations of various items of monel metal dyehouse equipment. International Nickel Company, Inc., 67 Wall St., New York, N. Y.

70. Fafnir Ball Bearings for One Process Pickers—outlining the advantages of ball bearings in guaranteeing smooth, accurate motion, particularly on eveners, as well as uninterrupted production, ease of operation and cleanliness of bearing units throughout the one-process pickers. Fafnir Bearing Company, New Britain, Conn.

72. The Merrow Butted Seam—A 16-page booklet defining and illustrating the Butted seam, describing its properties and outlining some of the advantages to be gained by its use in Textile fabrics. The Merrow Machine Co., Hartford, Conn.

77. Bulletin S 200—Illustrating and describing the new Reeves Variable Speed Drive for spinning and twister frames, explaining its many distinct advantages and giving charted results of exacting tests. Reeves Pulley Company, Columbus, Indiana.

88. Dayton Cog Belt Catalog—A 32 page booklet full of vital information on power drives, plainly and simply assembled and arranged so that anyone can select the proper standard drive for any condition. It also provides data for the calculation of drives where acquired. The Dayton Rubber Mfg. Co., Dept. C-11, Dayton, Ohio.

94. New Development by Onyx—Eight page booklet describing and giving uses of new developments in sulphonated aliphatic compounds . . . called Aliphatic Ester Sulphate and Glyceryl Sulphates. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

—106. Cotton System Warp Sizing on Multiple Cylinder Machines—a folder showing the advantages of this type of machine in making warps of acetate and other synthetic yarns and spun silk.—Charles B. Johnson, Paterson, N. J.

107. Complete Information on Alemite Lubrication—Showing how costs can be reduced through proper lubrication. Alemite Corp., 1828 Diversey Blvd., Chicago, Ill.

109. Some Properties of Starch and Dextrine—Explaining certain fundamental properties of starch and its derivatives and their action when heated and agitated. Stein, Hall & Co., Inc., 285 Madison Ave., New York City, N. Y.

110. 3-in-One Oil for Industrial Uses—showing the many industrial uses and advantages of this oil. A. S. Boyle Co., 1934 Dana St., Cincinnati, Ohio.

116. Arey—Telling in an interesting way the story of Arcy, which completely liquefies ordinary thick boiling pearl starch, and its many advantages. Drake Corporation, Norfolk, Va.

117. Anti-Friction Bearings as Applied to Spinning, Drawing and Twisting Frames—This bulletin shows with detailed drawings how a simplified design of roller bearing applications is made to replace the plain babbitt bearings and lists the advantages that are gained. It deals primarily with better continuous production and in consequence freedom from equipment care and repairs. Hyatt Roller Bearing Co., P. O. Box 476, Newark, N. J.

119. The World's Finest Sewing Machines—a condensed catalog giving details of the various Willcox & Gibbs sewing machines. Willcox & Gibbs Sewing Machine Co., 658 Broadway, New York, N. Y.

120. Goodyear Mechanical Rubber Goods Catalog—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill. Goodyear Tire & Rubber Co., Akron, Ohio.

121. Engineered Packages for the Textile, Dry-Goods and Apparel Industries—Showing the savings to be made through the use of properly engineered packages of corrugated fibre in the shipping of yarn, woven and knitted products. Hinde & Dauch Paper Co., Sandusky, Ohio.

122. Water Filters and Filtration Equipment—Containng complete description of the chemical processes involved in the coagulation and precipitation of foreign matter, the removal of iron, oil, manganese, from water and the production of clean water suitable for the textile industry, together with tables of specifications for standard filters, and information showing the extra profits to be made by the mill through reduction in costs and process difficulties, through removal of undesirable impurities in water. Permutit Company, 330 W. 42nd Street, New York, New York.

127. Vim Short-Center Drive with Vim Tred Leather Belting—16 page booklet outlining the special requirements of belts for short-center drives and the proper adjustment to give the highest efficiency. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

128. Houghton's Hand Book for the Hosiery Dyer—This book contains the result of 69 years of experience in research and development of processing materials for the textile industries, together with a wealth of other data useful to every hosiery dyer. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

130. Three New Textile Scouring Agents—This 32-page book gives many valuable formulas for the use of Houghton's Wonder Powder—a new type of colloidal detergent—in fulling, scouring and finishing nearly all types of woven and knit goods. Also contains several pages of valuable reference and conversion tables. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

134. STA-PUT Lubricants—A brief description of an entirely new line of tough film lubricants which not only gives greater protection to bearings but eliminates oil drip and reduces lubrication costs. STA-PUT Lubricants are made in grades to suit all types of textile machinery. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

139. Textile Detergents—Theory of the use of alkalis and control of pH—This 32 page booklet explains in simplified manner for the benefit of the layman the chemical processes that take place in using textile detergents in the finishing of textile goods. It contains many useful tables and data. Detergent Products Corp., Peachtree Bldg., Atlanta, Ga.

141. V-Belt Engineering Data Book—Over 50 pages of pertinent engineering information including data on selecting a V-Belt drive design of special V-Belt drives, numerous standard tables, charts and belt and sheaves list prices. Manhattan Rubber Manufacturing Div., of Raybestos-Manhattan, Inc., Passaic, N. J.

143. Winders and Winding—Describing the various processes in the preparation of cotton, woolen and silk yarn and illustrating and describing the different types of Universal winders and the various attachments to suit the particular winding requirements of the various branches of the textile industry. Universal Winding Co., 95 South St., Boston, Mass.

147. Let's "CAN" The Oil Can—describing permanently sealed bearings for life, and for higher speeds and temperatures single seal ball bearings which have to be lubricated only from one to three years. New Departure Mfg. Co., Bristol, Conn.

152. Plant Checkup List—Crane Co., 836 South Michigan Ave., Chicago, Ill.

154. Johnson Bronze Bulletin No. 340—showing over 600 sizes Johnson general purpose bronze bushings. Johnson Bronze Co., New Castle, Pa.

155. Link-Belt Catalog 1274 on the P.I.V. Gear—giving details of this positive variable speed control. Link-Belt Co., 910 South Michigan Ave., Chicago, Illinois.

156. Link-Belt Engineering Data Book No. 125—showing features and giving engineering data on Link-Belt silent chain drives. Link-Belt Co., 910 South Michigan Ave., Chicago, Ill.

157. Grading Rules and Complete Specifications for Laying and Finishing Maple Floors—Maple Flooring Manufacturers Association, 1794 McCormick Bldg., Chicago, Ill.

163. Roto-Koner—Bulletin describing the new No. 44 Universal Winder, known as the Roto-Koner for winding knitting yarns, which has many new and distinctive features. Universal Winding Company, 95 South St., Boston, Mass.

164. Johnson Rotary Pressure Joints—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instructions, types, sizes, dimensions and prices. The Johnson Corp., Three Rivers, Mich.

165. New Departure Speed Power Unit—Bulletin giving details of this compact, self-contained driver that gives a thousand different speeds at a turn of the wrist. New Departure Manufacturing Company, Bristol, Conn.

166. Precision Winding.—An interesting 30 page booklet on rayon yarns and winding, designed for weaving and knitting mills using silk and rayon. Universal Winding Co., 95 South St., Boston, Mass.

168. The Tuve-Tex for Tubular Knit Goods—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste. H. W. Butterworth & Sons Co., York and Cedar Sts., Philadelphia, Pa.

170. Gates Textile Accessories—showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions. The Gates Rubber Company, Denver, Colo.

171. Design of V-Belt Drives—48 page booklet full of valuable tables and data showing the type, number and design of V-Belts that will give the greatest efficiency on each particular drive. The Gates Rubber Company, Denver, Colorado.

176. Sonoco Products—A 60 page illustrated booklet giving descriptions, specifications and charts of the many Sonoco products, including: bobbins, cones, tubes, cork cots, roving cans, spools, rolls, etc. Sonoco Products Co., Hartsville, S. C.

177. New Advances in Loom Equipment—12-page booklet describing discoveries and advances which loom manufacturers have made in keeping pace with these discoveries down to the present time—non-technical information, amply illustrated. Emmons Loom Harness Co., Lawrence, Mass.

180. These Extra Cushion Cork Cots Offer Six New Advantages—a 6-page folder which tells the story of the new Armstrong's Extra Cushion Seamless Cork Cot from the viewpoint of the mill man. The folder describes HOW the new cot is of advantage to mills spinning cotton yarn; WHY it is better, and something about the method of manufacture, and also gives PROOF in the form of some tests that have been made with this new roll covering material. Armstrong Cork Products Co., Textile Division, 930 Arch St., Lancaster, Pa.

183. Schieren-izing—describing leather belt manufacture from the selection of hides through the various processes to the final tests, also showing illustrations of belts with unusually long service lives. Chas. A. Schieren Co., 31 Ferry St., New York, New York.

184. Speed Control Handbook T-35—new reference book on variable speed control, said to be the most complete and helpful book on this subject ever published, 112 pages and more than 200 illustrations of interest to every production executive, purchasing agent, superintendent, overseer and master mechanic. Reeves Pulley Co., Columbus, Ind.

185. Dulux—The White Finish That Stays White—New book describing the new ten-point finish for factory walls and ceilings, the finish that stays whiter, stays cleaner and stands repeated washings. E. I. duPont de Nemours & Co., Finishes Division, Wilmington, Del.

186. F-7 Feeder Bulletin — Describing the better blending that is secured and the important cleaning operation that is added by using F-7 feeders in place of bale breakers. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

187. The Wildman Single Head Full-Fashioned Hosiery Machine—Literature on request from the Wildman Mfg. Co., Full Fashioned Division, Norristown, Pa.

188. Form 374—This form enables you to gather your own cost data on your sewing machines and determine whether new Union Special Machines will show big savings. Furnished free by Union Special Machine Co., 400 No. Franklin St., Chicago, Ill.

190. Warp Conditioning Units for Synthetic Yarn Slasher—booklet giving full details will be sent free to mill men who write on their company letterhead. Chas. B. Johnson Co., Paterson, N. J.

191. The Bahnson Humiduct—bulletin describing Bahnson Humiduct system which combines humidifying, heating, ventilating and air conditioning all in one unit, will be sent free on request. The Bahnson Co., Winston-Salem, N. C.

192. Wood Tanks for Every Purpose—100 page illustrated catalog showing the advantages and lasting qualities of wooden tanks. Rubber-lined tanks for dyeing and other uses in the mill are illustrated and discussed in detail. Hauser-Stander Tank Co., Ammen Ave. and Spring Grove Ave., Cincinnati, Ohio.

196. Economy of Diesel Engine Power—Bulletin No. 3030, 44 pages, illustrated, giving advantages of diesel power in industrial plants. Fairbanks, Morse & Co., Chicago, Ill.

197. Extra Life for Chain Link Fence—A folder telling about Bethanized Wire and explaining its advantages for mill and factory protection. Anchor Post Fence Co., Eastern Ave. and Kane St., Baltimore, Md.

198. The Perfect Loom Let-Off—Folder pointing out the advantages of the new asbestos friction loom let-off and giving specifications and price list. Fiber Mfg. Co., Newton, N. C.

COTTON, Grant Bldg., Atlanta, Ga.

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Please be sure to fill in your Firm's Name and your Position on the Coupon. This service cannot be extended to you unless this information is furnished.

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Established 1865
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KNITTING SECTION

The Maintenance and Fixing of

Full-Fashioned Hosiery Machines

By A. J. Cobert

This article begins a thoroughly practical series on full-fashioned machine maintenance, prepared especially for COTTON by a man who is recognized as a competent mill man. As a whole, the series will constitute an invaluable source of helpful information for the beginner in the same, as well as to the experienced mill man.

The accompanying first article deals with the vertical motion of the needles. The following brief outline of some of the topics to be treated in subsequent articles will indicate the thorough manner in which Mr. Cobert plans to cover the subject:

Horizontal motion of needles; Complete catch-bar analysis; Formation of Stitch; Sinker head and knock-over bar analysis and adjustment; Jack head, slur cam and slur bar analysis and adjustment; Adjustment of tension in fabric and straightening sections, Matching union between foot and leg; Discussion of narrowing machine settings and adjustments; Coulier motion and clutch assembly; Frictions, shock absorbers, carrier and narrowing head assembly; Shogging assembly and general discussion of cam shaft; Summary of adjustments and helpful kinks in fixing.

The reader is urged to preserve his copies of this interesting series as they appear.—The Editors.

IT HAS BEEN stated often that no amount of text book studying will give a student the ability to become qualified as an authority on the technical points of a certain machine, or to make that machine do his bidding, but it is evident that first hand information on any subject is of value. Especially is the information valuable when it is in printed form because then it may be referred to as often as is necessary and when other means of securing advice are not accessible. Also, the longer the subject is studied, the clearer it becomes.

In school we have memorized certain rules which, at the time, seemed meaningless, but after being confronted with a problem and working over it for some time, the explanation of the rule became as apparent as if a light were switched on in a dark room. Therefore, it is hoped that our readers will try to remember as much from the following paragraphs as possible, and save all the articles on this subject for future reference. This series of articles is intended to help those desirous of studying the various motions and adjustments on full-fashioned hosiery machines, either to become more proficient in their work or to give those interested a general idea of the workings of these intricate machines. As maintenance of these machines has always been an interesting vocation and as little has been written on the subject, these discussions should meet a timely demand.

The production of full-fashioned hosiery has grown to be a major industry in this country in the past 20 years—due to the many advantages of this type of stocking. The main reason for its popularity is the narrowing motion or fashioning process which permits shaping of the fabric. Today, many manufacturers are featuring custom made hosiery to fit individual requirements as a part of their regular production.

In order to make this fashioning possible, it was necessary to deviate from the tubular type of knitting to the flat machine where the fabric may be narrowed at will to follow the contour of the leg and foot. This is accomplished by use of the narrowing machine and double cam motion, the double cams permitting the needles to perform a movement entirely different from knitting, synchronizing them with the narrowing points in the fashioning process. This was the revolutionary step in the science of knitting.

We will start the series with a discussion of some of the simpler adjustments and gradually analyze the various motions and their relative adjustments until a thorough study of the entire machine has been made. For example, no clear conception of the adjustments of the needle bar can be understood unless all the governing factors relating to it are known. To state merely that moving a needle bar in closer to the sinker head, by use of the set screws for that purpose, will enlarge the stitches, is to give misleading information unless a thorough knowledge of the entire motion is understood.

As there is only one point where the setting is correct—and its flexibility is limited to a small degree—the importance of keeping it there cannot be over-emphasized. The designing and construction of a full-fashioned knitting machine necessitate a great many adjustments that can be used erroneously with little or no visible effects. Too much fixing is the cause of most trouble. Sometimes adjustments are made irrespective of consideration for the rest of the machine, or without analyzing the underlying difficulties. After such maladjustments the machine will perform apparently smoothly, but its versatility will be greatly reduced, only becoming evident when style changes are made, lighter or heavier yarns used, or when slight changes in temperature and humidity take place.

Such defects as cutting holes in the fabric may be caused by any one of a number of faults and may be relieved temporarily by any one of a number of adjustments, but there is only one real cause and

only one correct solution. Proper and careful diagnosis is the secret of competent fixing.

As this series is not intended to teach erecting, only a discussion of adjustments will be entered into and not a discussion of assembling the various parts. In studying these articles, one point should be kept in mind: While the machine builder or erector must adhere to ironclad rules in the use of gauges, the fixer, on the other hand, does not necessarily resort to standard gauges and settings in many instances, but takes his measurements by comparison with other parts of the machine in question. He naturally should keep as close to standard settings as possible. As there are many different types of machines in use, no concrete rules can be given to make a certain setting because the set screws, etc., used are different and are in different positions on the machines. However, as the principle is the same on all machines, the reader should have no difficulty in locating and making adjustments once he masters the elementary rules.

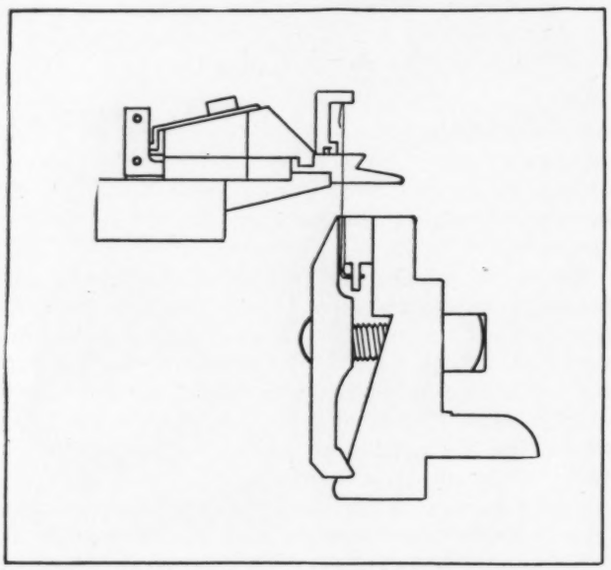


Fig. 1. Sinker head and needle bar with needle height gauge in position for measuring. Knocking-over bar is not shown here . . . . . .

Discussion of Needle Bars

Needle bar settings are the most important of all adjustments on the machine because upon this point depend the gaugings of the press, catch bar, knock-over, and all narrowings.

The needle bar motion is comprised of two separate movements, one vertical, operated by the needle bar cams, and the other horizontal, operated by the press cams. In addition to these motions, the needle bars are actuated horizontally by the regulator cam, and, by the rocker and loose course cams at such times as required.

Considering the vertical movement, Fig. 1 shows the needle bar roller on the half round of the cam. It is at this point that the needle bar height is set. The use of a standard gauge for this purpose is important in setting up a new machine or when regauging an entire machine for any purpose whatsoever. This gauge is generally a small block of steel made to rest on the sinkers when they are in the forward position, with some portion of it coming in contact with the tips of the needles—in this manner the needle height may be judged at that point.

Before any attempt is made to set the needle bar height, the needle bar rollers must be leveled out to prevent any twist in the shaft. This can be done in the following manner:

With the needle bar rollers on the half round of the cams, remove all needle bar springs with the exception of the one in the center, this one being just enough to hold the rollers close to the cams. Taking for granted that this roller is correct, adjust the others by the set screws on the rollers until they feel uniform in pressure, with the one exception as mentioned; as the roller having the spring on will be tight against the cam, the next one on either side should turn somewhat easier, thus allowing for the weight of the needle bars to take the rollers away. Continue to adjust the rollers from both sides of the center, always allowing a little less pressure between the rollers and cams until the end ones are reached. These end ones should be the easiest to turn. Properly adjusted rollers should come somewhere close to the center of the slot in the needle bar arms. This will permit plenty of adjustment either way and at the same time keep the rollers where they were designed to be. In allowing for torsion in the needle bar shaft, do not permit too much difference in the distance of the rollers from the cams as very little is required. After these adjustments are completed, hook all springs back on and proceed with the next step.

Next, close all needle bars and bring the sinkers in the forward position, taking care not to turn the machine too far, that is, do not permit the needle bar rollers to get off the half rounds of the cams. This is to insure the needles remaining at the proper height for gauging. Then start with number one needle bar and using the height gauge, make the adjustments necessary to bring the bars as closely even as possible for height. Do not make any adjustments on the rollers once they are leveled in the aforementioned manner. Use only those adjustments directly on the arms extending to the hinges. On single section needle bars, each side of the section may be adjusted for needle height, but on double needle bars only the extreme ends of the bars can be adjusted. This leaves the inside end of the two sections without any adjustment. Occasionally, this inside end of a section will be found to be high or low and the only remedy is to raise one end of the sinker head by use of thin paper. Filing is not advisable. This will be explained more fully in a later article on sinker head adjustments.

After all the bars are adjusted with the gauge, place the machine in a position where the tips of the needles are level with the top of the sinkers and dividers. A much closer adjustment of needle height may be secured in this manner, either by feeling the tips of the needles protruding between the sinkers with the fingers or with the edge of a

feeler gauge. As this setting is only comparative, it is necessary first to set the bars close to the proper height with the gauge. Where the fixer merely wishes to set one bar that is causing trouble, or level them all on an average, the gauge will not be necessary. If the machine in question is an old one, the fixer must first be sure that none of the cam bits on the needle bar cams vary in height at the point where he wishes to gauge the needles. If this should happen, the knockover would not be uniform when the needles reach the lowest point as the uneven cam bits would prove a false setting. This is extremely important.

"Too much fixing is the cause of most trouble. Sometimes adjustments are made irrespective of consideration for the rest of the machine. After such maladjustments the machine will perform apparently smoothly, but its versatility will be greatly reduced."

It is to be noted that at no time should the needle height deviate from the standard setting unless absolutely necessary. If trouble develops which might appear as improper needle height, the difficulty can generally be remedied in some other manner. For example, lack of knockover, where the needles do not go deep enough between the knockover bits to clear the fabric sufficiently, can be overcome either by raising the knockover bits themselves if they are low, or by increasing the highest point of the needle bar cams directly at the bits made for this purpose. This last adjustment will always be far more satisfactory than anything else. Lowering the needle height to increase knockover will only have a tendency to throw the entire needle motion off balance. A few of the ill effects from this last adjustment may be listed as follows:

The narrowing machine will appear too high for utmost efficiency. The needles will arrive at the point of press too early and leave too early. Stitches will hang to the edge of sinkers when shedding from the noses, causing broken fibers and distorted fabric. Many vertical streaks can be traced to this maladjustment, especially if the sinkers and dividers are slightly rough. Improper synchronization of needles with catch bar motion results in poor selvages.

Raising the needles to decrease knockover will have the opposite effect at all points, that is, with reference to the narrowing machine and point of press. This adjustment will bring the needles too high when shedding the stitches from the sinkers, causing distorted fabric by permitting them to lose their shape before entering the knockover position. Poor selvages will result also from this adjustment. This rule now follows:

It is far safer to change the position of any of the relative motions rather than the needle height. This should be considered a basic setting for everything else.

(The next article in this series will discuss the horizontal motion of the needles. See page 103 for a detailed outline of the entire series.—The Editors.)

An Eye on the Knitting Mills

MARION (N. C.) KNITTING MILLS have installed 3 Fidelity 4-feed automatic ribbers and have replaced 60 old model machines with new automatic knitting equipment.

Wytheville (Va.) Knitting Mills, Inc., have begun the construction of a building on a 300-acre plot which was purchased some time ago. Pendleton Construction Company is doing the work.

Imperial Hosiery Mills, Mocksville, N. C., has installed 52 automatic machines for making men's half-hose as the initial equipment in the plant.

Goodman Hosiery Mill will be established at Hickory, N. C., and operations are expected to begin at an early date.

W. M. Sanders will establish a mill at Smithfield, N. C., which will house 42 knitting machines.

The Auburn (Ky.) Hosiery Mills has been organized with a capital of $150,000. Roger N. Kimball, former treasurer of the Allen-A Company, is a member of the group fostering the organization.

The McMaid Hosiery Mill is the name of a new plant at Marion, N. C., which will be operated in the building formerly occupied by the Lake City Hosiery Mill. Machines have been installed and appliances added that make them automatic.

Work has begun on the building to house the Monroe (N. C.) Full-Fashioned Hosiery Company's 39 machines. The company will train local employees.

A new hosiery mill of 42 knitting machines has been begun at Smithfield, N. C. The expected capacity of the plant will be 2,000 dozen pairs weekly.

Walton Hosiery Mill, DeFuniak Springs, Fla., is planning to install more machines.

Juvenile Hosiery Mills, Inc., Greensboro, N. C., has built an addition 65 x 90 feet.

Pittsfield (Me.) Knitting Company has installed a set of cards, picker, duster, and spinning mule for use in the manufacture of knitted sports goods.

It is understood that J. A. Goodman, former president of Real Silk Hosiery Mills, Indianapolis, Ind., is planning to establish a full-fashioned hosiery mill in Mississippi.

Baker-Cammack Hosiery Mills, Inc., Burlington, N. C., have been chartered with an authorized capital stock of $600,000. The company is already in operation; it is assumed that the new charter will allow the company to expand operations.

Crisp Hosiery Mill, Cordele, Ga., will install 5 new hosiery machines, and the mill will operate two shifts.

Oakbrook Hosiery Mils, Inc., Reading Pa., have purchased the Eagle Silk Mill, Mechanicsburg, Pa., and will install new machinery.

Snyder to Buy Knitting Mill

Allen L. Snyder has made a contract for the purchase of the Chester (Ill.) Knitting Mills, which manufacture hosiery and underwear. The price has not been made public. The plant is said to be valued at $150,000, but has operated since receivership in 1931 with sales between $600,000 and $750,000 annually. The purchase of this plant does not affect in any way the other branches of the mill.

Sylvester Joins Hoover

William Sylvester, for many years superintendent of the Archer Hosiery Company, Columbus, Ga., makers of full-fashioned hosiery, has become superintendent of the Hoover Hosiery Company, Concord, N. C.

Kidder Manager for Radium

Wells Kidder, formerly sales representative in the Berkeley, Cal., territory for Cooper's, Inc., has become manager of the Radium Hosiery Company.

South-Central Section of AATCC Meets August 6 and 7 on Lookout Mountain

The South-Central Section of the American Association of Textile Chemists & Colorists will hold its annual summer outing at the Lookout Mountain Hotel, Chattanooga, Tenn., August 6 and 7. Joint hosts of the affair will be the Piedmont Section and the Southeastern section. Over 200 guests and members are expected to attend this get-together. Robert Wheeler, Crystal Springs Bleachery, Chickamauga, Ga., is general chairman of the outing and promises a varied and entertaining program. Robert Covington, Davenport Hosiery Mills, Chattanooga, Tenn., will be in charge of the annual golf tournament. Chairman of all arrangements is Robert Cowan, Industrial Colloid & Chemical Company.

Booklet by Titan Chemical

Titan Chemical Products, Inc., Jersey City, N. J., manufacturers of dyestuffs, oils, sizings, and softeners has made available a handy-size booklet which describes the various products of the company. Formulas are given that are of a general nature, only having to be modified slightly to meet the specific requirements. Several pages are left blank for notes and for specific formulas. The booklet should be of interest to men in the dyeing, bleaching and finishing of textiles.

1937 Fall Hosiery Card

The Textile Color Card Association, 200 Madison Ave., New York City, has issued the fall hosiery color card to its members. 5 new and 4 repeated colors are shown. Important new fashion influences are discernible in this fall selection, indicating the close co-ordination which has been carried out between these hosiery shades and the outstanding color tendencies in costumes and accessories. The new colors are Burnt Sugar, Acajou Red, Rio, Red Cedar, and Incantan.

Hollister Represents Merrow In the Carolinas

E. W. Hollister, Box 721, Spartanburg, S. C., though now distributor for Merrow Machine Company, Hartford, Conn., will continue to represent the company in the Carolinas. The machines will be shipped from Hartford, Conn., but parts and supplies will be kept available in Spartanburg to the trade. Mr. Hollister will also market the products of the Dinsmore Manufacturing Company, Salem, Mass., makers of chain stitch mill and cloth room sewing machines, and the Rayer & Lincoln rotary sewing machines. This announcement was made in a letter to the trade by the Merrow Machine Company.

Mr. Hollister

Packaging Handbooks

The Hinde & Dauch Paper Company, 454 Decatur St., Sandusky, O., has published a pocket-size booklet entitled *How to Seal Corrugated Shipping Boxes.* The booklet devotes one chapter to each of the 4 main methods in common use: adhesives, gummed tape, stitching, and metal straps or wires. The instructions given are brief and to the point. A second handbook on *How to Ship by Air Express* is now in preparation.

April Hosiery Shipments Above Last Year

The National Association of Hosiery Manufacturers in its current *Statistical Bulletin* of the hosiery industry, states that in spite of a seasonal decline in hosiery shipments between March and April of this year, total shipments for the latter month remained above shipments for April, 1936, for most hosiery types. Total shipments of hosiery in April, 1937, amounted to 11,376,479 dozen pairs, as against 10,176,031 dozen pairs shipped in April of 1936, the gain between these two periods amounting to about 12 per cent. The accompanying table shows the extent to which various branches of the industry participated in this gain:

During the first four months of 1937 total shipments of all types of hosiery amounted to 45,359 dozen pairs, as against 37,745,318 dozen pairs shipped during the first four months of 1936, a gain of almost 20 per cent. The accompanying table shows the shipment increases for various divisions of the industry:

Stocks of all types of hosiery were turned over 6.5 times during the 12-month period ended with April, 1937. Full-fashioned stocks were turned over 7.4 times, while seamless stocks were turned over 6.2 times. These data represent a notable improvement over the situation obtaining a year ago. Thus, during the 12-month period ended with April 1936, stocks of all types of hosiery were turned over 6.0 times, stocks of full-fashioned hosiery during that period were turned over 6.7 times, while stocks of seamless hosiery were turned over 5.7 times.

Hosiery Shipments

	Dozens of Pairs April		Per Cent Increase April, 1937 over April, 1936	Dozens of Pairs First Four Months		Per Cent Increases 1937 over 1936
	1937	1936		1937	1936	
Women's full-fashioned	3,366,113	3,065,759	9.8	12,910,751	10,985,802	17.5
Women's seamless, excl. wool	1,245,977	1,140,573	9.2	4,831,268	3,954,793	22.2
Men's half-hose, excl. wool	3,094,526	2,879,889	7.5	12,022,039	10,398,401	15.6
Children's and infants' hos.	410,821	417,040	—1.5	2,120,758	1,998,431	6.1
Anklets	2,454,464	2,075,546	18.3	10,014,104	7,748,286	29.2
Cotton bundle goods	322,002	279,899	15.0	1,403,510	1,183,469	18.6
Ribbed goods	231,868	178,282	30.1	1,202,665	983,039	22.3
Woolen goods	250,708	139,043	80.3	745,264	493,097	51.1
Total, all types	11,376,479	10,176,031	11.8	45,250,359	37,745,318	19.9

Leg and Foot Not Properly Matched

Two men offer their opinions on sample hose from full-fashioned manufacturers . . . . . .

A MANUFACTURER of full-fashioned hose sent a sample of his fabric to another manufacturer asking his advice as to the cause of the footer knitting being seemingly an entirely different fabric from that of the legger. The latter's advice was that a different method of drying the legs should be tried. The former came back saying that the proposed method had helped considerably but that the defect was still in the hose. He enclosed a sample of the stockings made on a 45-gauge machine with 3-thread silk and with 7-thread welt and splicing.

The manufacturer again offered the following:

"It is my judgment that you are operating with two conditions which are not correct, and if corrected, will greatly improve the appearance of your foot fabric. First, the silk seems to be entirely too dry. Second, there is evidence of a lack of sufficient ware roller or take-up weight on your footers. I suggest that you arrange to get more moisture on your footing silk through either better conditioning of the cones or passing the thread through a wide trough, or over and under more rods in the trough to produce better wetting of the silk, and then add some take-up weight. If you will do this I believe that you will see a big improvement in your foot fabric.

"Your transfer lines indicate that you do not wet-up your transfer bars before placing them on the machine. If you are not doing this I would suggest that you provide your topper with cup and brush. The cup is to carry soft water, to which you may add some softening solution such as a little olive oil soap solution, or any softening solution you may be using in your trough on the machine. The brush should be a rubber-set one as rust will develop on metal-set brushes and will finally give trouble in producing iron rust stains. We use largely cheap shaving brushes such as you can pick up at the ten cent stores. The operation is one of after the topper has completed filling the bars to take the cup and brush and wet out the entire area of transfer line on all bars while they are still stacked on the rack. This can be done quickly and easily, and will greatly improve the appearance of the topper line."

This man, the author of the letter, sent a copy of his letter and the sample hose to COTTON, with the possibility in mind that some other manufacturer had suffered the same trouble in his plant, and asking the editor of COTTON to use the information as he saw best. The sample hose were in turn submitted to another manufacturer of full-fashioned hose with the request that he offer an opinion on them. The substance of his remarks is:

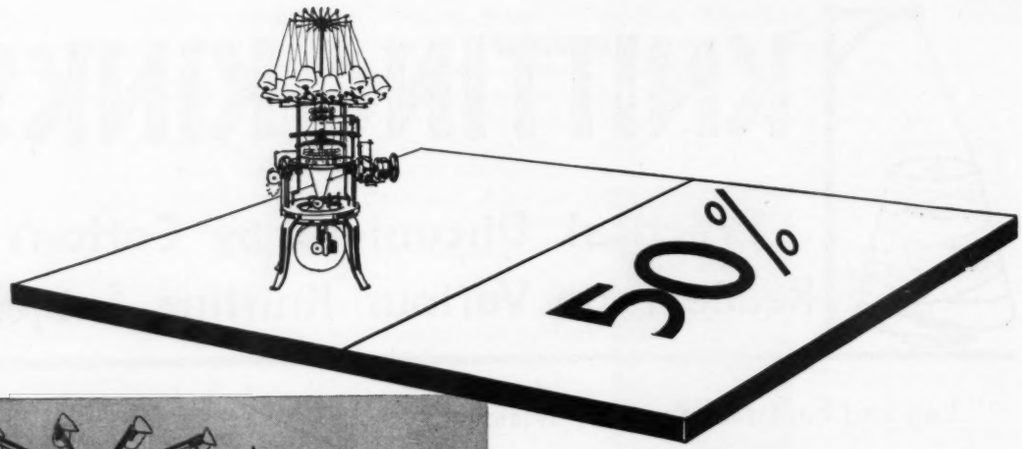
After carefully inspecting the stockings you mailed, I wish to state briefly, while not criticizing this merchandise, that the construction of the feet on these stockings is out of proportion. The sole would be better if the manufacturer used a 6-thread or a 20/22 which is the same but somewhat cheaper. The toe is entirely too light and isn't a very good production number because too many changes have to be made going in the toe. I suggest that the manufacturer use two sole carriers in the toe with his ringless, thus giving a 15-thread ringless toe. This particular style requires only the performance of 3 things; first, take off rockers; second, set slacker; and third, raise the two stops on the pointex rack in order to let the sole carriers cross the entire knitting head. There isn't a single yarn to be cut when going in the toe on this style, and on a 24-section machine, production should be 38 to 42 dozens in 8 hours.

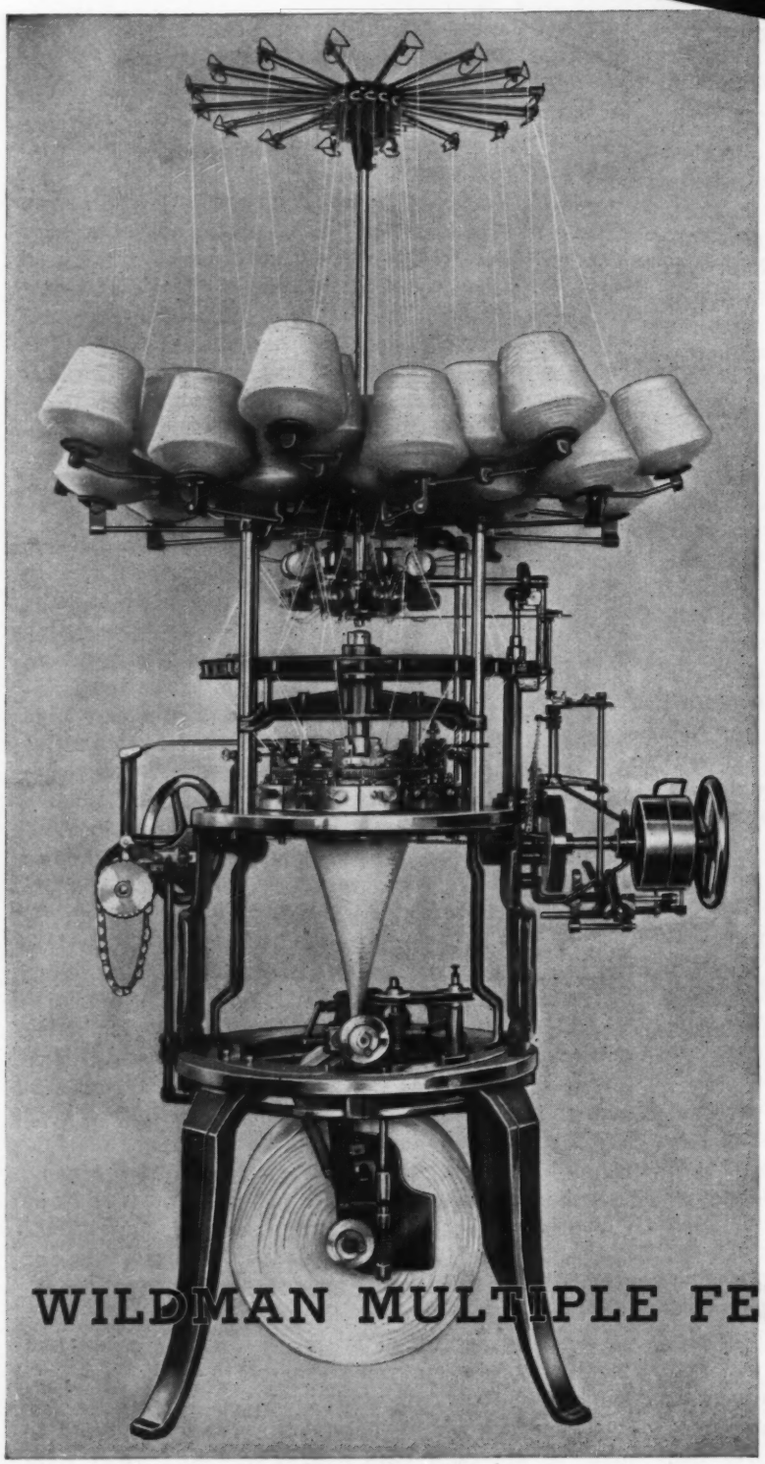
I notice that this particular silk is of a very high boil-off. These stockings seem to have been knitted for some time because they have an odor which comes from gum and treatment in silk after it begins to age. [This point may or may not have been the fault of the manufacturer of the samples. It is not known how long the correspondent kept the samples before sending them to COTTON.]

The legs on these samples are very good, there being few, if any, stitch distortions, but the appearance of the foot ruins the entire stocking.

The question is "why is the match between the leg and foot bad?" As it is impossible to see this man's machines, it would be hard to say exactly what is wrong. However, before this man can realize a good union between the leg and foot he must clear the fabric on his footer. I feel sure that if he has a capable fixer he will have his trouble solved in no time if he will check his machines for the following suggestions: the leg is 3 or 4 courses tighter to the inch than the foot; while not using his ringless attachment throughout the toe, two ends of the body yarn have a tendency of drying out while the toe is being made, and therefore of showing up on the next set with the first two or 3 courses being knit dry.

From 3-thread stockings on up, toppers should be made to wet their bars with a very soft water solu-





Save 50% floor space

. . . a 16 feed machine providing 100% greater production with actual increase of power used of only 36%.

. . . trouble-free operation throughout.

Here are just three of an impressive list of advantages featuring The New Wildman MULTIPLE FEED RIB MACHINE . . . a distinctly modern departure in underwear knitting.

Other striking features are Furnishing Wheels that give even yarn tension . . . Gear driven dial prevents fabric pinching . . . New belt-driven take-up . . . Easier cloth inspection . . . Yarn carrier swinging out for easy threading . . .

The list is long . . . we suggest that you send for Special Descriptive Folder . . . and arrange for inspection in our plant.

WILDMAN
THE WORLD'S STANDARD

The New WILDMAN MULTIPLE FEED RIB MACHINE

WILDMAN MANUFACTURING CO.
NORRISTOWN PA.

tion. The manufacturer is not using enough weight for the work rollers. It must be remembered while using a 7-thread sole yarn for a 3-thread body yarn, the 7-thread sole requires a considerable amount of rockers, thus making the 3-thread body yarn lag to some extent, and without the proper amount of weights the fabric shows up somewhat sleazy, therefore the needle height and the knocking-over bit height must be set to gauge to alleviate this trouble.

I noticed that some of the stitch distortions in the samples looked as if they were caused from rebounding sinkers during the dividing action. This can be corrected only by the proper jack spring setting. On Reading machines .013-inch pressure is right for the jack spring. On some machines of foreign make the pressure is obtained by sense of touch.

The press rollers should be equalized and the needle bars should be checked because if a needle is screwed in too far and a sinker head has a bit of play, as the catch bar moved to its backward position the sinkers have a tendency to rise, therefore the stitch hangs on the nibs of the sinkers, resulting in loose wales or stitch distortion. From time to time the machines should be checked to see that there is the thickness of a divider of the corresponding gauge of the machine between the verge plate and the back of the sinker butt.

The comments from these two men proved helpful to the manufacturer. COTTON will welcome at any time questions from its readers concerning manufacturing problems.

Further Discussion on Relative Length of Full-Fashioned Sinkers and Dividers

EDITOR COTTON:

Referring to the inquiry* of "CONTRIBUTOR NO. 6591" on page 139 of the November 1936 issue of COTTON who states "we note that the dividers and split dividers are approximately .006-inch longer from the inside of the butt to the inside of the throat than are the sinkers that we use with them", and asks what advantage there is in having this difference, I would like to offer my opinion.

The measurements from the *inside* of the butts of the dividers have no significance at all so far as the fabric is concerned.

First of all, the function of the divider is, as its name implies, to divide the loop made by the sinker in half and force the thread thus taken from the sinker into the space between the next needles; dividers are operated by the catch bar only, and the divider butts on some types of machines are made slightly less for the purpose of saving the corners of the divider butts, the difference between the divider and sinker butts being taken from the inside of the divider butt. This difference can have no effect upon the size of the loop made by the divider, its action relative to the length of the loop being determined by the outside or back of the butt. The instant that the catch bar starts the return or backward movement, the groove of the catch bar then engages the front of the divider butt, but by this time the work of dividing has been completed, and the catch bar is returning to its rest position to be raised for the sinkers to be freed ready for the slurcock on the next course.

If the .006-inch difference is in the distance from the outside of the butt to the throat of the divider, there would be that much difference in the length of the sinker and divider loops after the dividing function is completed. Some of this difference might be eliminated by the needles in the knock-over motion, but a difference of .006-inch on a 42-gauge fabric that was being knitted moderately tight could not be balanced by the knock-over motion adjustment.

We suggest that "CONTRIBUTOR NO. 6591" put his micrometer on the distance between the throat and outside of the butts of the dividers if he wishes to concern himself with some phase of loop formation that is important enough to warrant an investigation of that sort.

CONTRIBUTOR NO. 6685

*Other discussions of this subject appeared on page 187 of the April issue and page 153 of the June issue.

Longer Springs Prevent Much Trouble

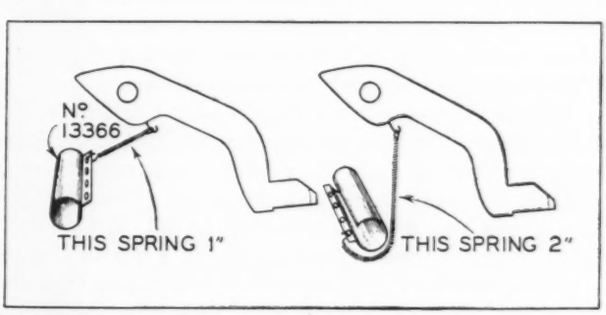
Another helpful kink. Do you have one to send in?

EDITOR COTTON:

This is a kink that may help someone so I am passing it along to your readers.

One of the common troubles on a S. & W. machine is that the short finger spring becomes stretched or breaks. When it stretches it becomes so weak that it will not pull the finger down properly.

To eliminate this trouble we use a spring that is twice as long as the standard spring. The accompanying illustration shows how these springs are applied to our machines. We have found that, besides eliminating spring trouble, the long spring eliminates smash-ups due to the heel and toe finger spring breaking and catching on the latch rings. The yarn change is carried out better also.



Illustrating the application of the longer spring which eliminates much machine trouble . . .

They are installed simply by turning the spring holder around on the shaft, as shown in the drawing.

I believe if a fixer will put on a set of these springs that he will not be satisfied until they are on all of his machines.

CONTRIBUTOR NO. 6680

Fixing Model "K" Machines

THIS is the third in a series of practical discussions on the operation and adjustment of the Model K knitting machine, applicable primarily to the plain machines, but containing much pertaining to the spiral type of equipment. The first installment appeared in the April issue and the second in the June issue. Yarn arrangements, make-up trouble, the cross-bar assembly, and transfer trouble have been discussed. This article deals with the cylinder, sinkers, sinker cams, sinker caps, slackening the double sole, and stitch cams. The author will cover any particular phase of fixing Model K machines that you may request . . . . . .

The Cylinder

IT IS REALLY REMARKABLE how well a Model K cylinder stands up when we consider how much abuse it is subjected to every day. In most cases the abuse is not intentional because no sane machine fixer will injure a cylinder purposely. Many cases of cylinder abuse are accidental and, whether we are willing to admit it or not, carelessness has ruined many a new cylinder. Machines get out of time, cams work loose, springs break, yarns cause jam-ups, up and down picks fail to work properly, and many other mechanical failures take place which can rightly be charged to normal wear and tear or accidents, if you prefer. In *every* case the cylinder suffers abuse in addition to whatever damage is done to other parts.

But we do know that operators set dials wrong, thread machines wrong, set pattern chains improperly, get behind with their inspection and permit broken needles to multiply into 10 or 20, try to fix before they have really learned to knit; right you are, brother fixer, that's carelessness *absolutely*. Yes, I'm giving your knitters the works—but I've only fired one barrel—I'm saving the other for *you*.

Did you ever set a chain pawl plate, main pawl plate or auxiliary pawl plate wrong, you know what I mean, guess at it and then find a jam-up a few minutes later? Do you remove chain links with badly worn lugs before they cause a jam-up or after? Do you re-polish stitch cams, raising cams, etc., at regular intervals or do you wait until they give trouble? When you see an up pick slipping off of the up pick cam and riding on the needle butts, do you fix it immediately or do you let it alone because it is not doing any harm at the moment? These are but a few things which cause cylinder abuse; brother fixer, call them what you will, they are not accidents.

Except in severe cases the cylinder itself does not suffer, the walls take the punishment and these, due to the method of S. & W. cylinder construction, can be replaced when damaged or broken. The machine builder will also completely re-wall an old cylinder and return it to the mill as good as new at a nominal cost.

So for two very good reasons it is costly to run machines with bad cylinders; first, they run up needle and parts cost and second, they produce merchandise that is not of good quality. Actually we pay for a good cylinder so we may as well use one.

Inside sinker rings also must be in good condition because unsightly loose or tight streaks in the fabric will be in evidence if they are not. They may be replaced at a moderate cost.

Sinkers, Sinker Cams, and Sinker Caps

Sinkers are among the least of the Model K fixer's every day trouble, especially if he keeps his sinker cams in good shape, removes packed lint (which accumulates between the sinkers) at regular intervals, and attends to daily lubrication of sinker caps. It frequently becomes necessary to replace a few damaged or broken sinkers and many fixers use new sinkers in such cases. A better plan is to use old sinkers, which have been run approximately as long as the bad sinkers that must be replaced. By changing a complete head of sinkers and using all serviceable sinkers for repairs, mixing new and old sinkers can be avoided thus preventing much uneven or streaky knitting.

From observation and daily contact with other machine fixers, I am of the opinion that sinker cam and cap adjustments are often changed unnecessarily, more so than any adjustments on the whole machine. Each fixer, of course, has his own ideas on how to set sinker cams and to adjust the sinker cap, but why should he advance a sinker cap one day to overcome one kind of trouble and retard the same cap the next day to overcome a different trouble. Perhaps it's just a habit or could it be that the fixer is not sure whether sinker cams and caps are set right? Be that as it may, it happens as follows: the fixer gets a complaint on uneven knitting in the heel and toe (often called washboards, stair steps, loose and tight) and he finds the machine and decides the left stitch cam is knitting the tight stitch. He advances the sinker cap by turning the adjusting screw inward a turn or two and knits a heel and toe. Yes, sir, the stitches are even, the washboard is gone—it took about 5 minutes to fix that one. But the very next day that same machine cuts holes in the gore, cuts the heel yarn completely off, loops or skips or what have you. The fixer has a look at the machine and sees that the sinkers are coming in too early so he retards the adjusting screw a turn or two, knits a heel and toe, and all is well *except* that the washboard has come back. Something tells him the left stitch cam is shorter than the right; he grumbles a little and then does what he should have done the day before. My guess is that he knew what was wrong in the first place: he was simply trying to get by—maybe you don't agree with me.

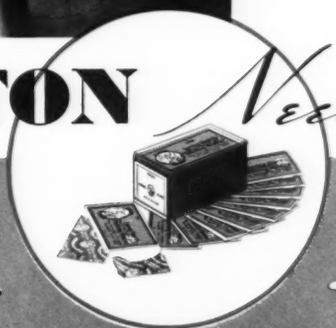
Ask the average machine fixer how he arrives at correct sinker cam and cap adjustments and his reply will be that he can tell by looking at the sinkers when they are set properly. If he gets results his adjustments must be correct but how does he teach the apprentice to look at sinkers and tell when they are set right or wrong. For the benefit of that apprentice, who is in doubt, the following simple method of

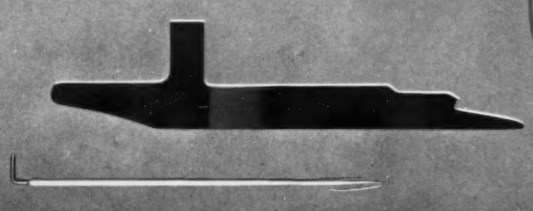
UNIFORM DIAMETER

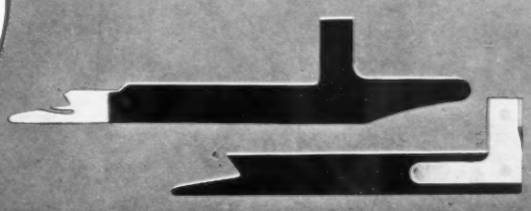
Of Hooks

• The diameter of the hook portion of a spring beard needle determines to a great extent the size of the stitch to be laid. It follows, logically, that more uniform hooks produce more uniform knitting. Torrington assures uniformity in needles at this point by special machines that operate with microscopic accuracy. Precision manufacture from tip to butt—that is the secret of Torrington performance. Torrington sinkers, dividers and split dividers are machine-made also, by the same painstakingly precise methods.

TORRINGTON *Needles and Sinkers*







A MAN'S SWEATER

KNITTING THAT BLAZES
A TRAIL OF SALES

SPORT SOCKS

AND A PAIR OF ANKLETS

• Knitters the world over put their faith in Torrington Needles. It is not merely that they are more dependable... or that they are more uniform. It is that the combination of the two sterling characteristics produces knitted merchandise that blazes a trail of sales and good will wherever Torrington Needles are used.

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The Torrington Company, 1640 Fairmount Ave., Phila., Pa
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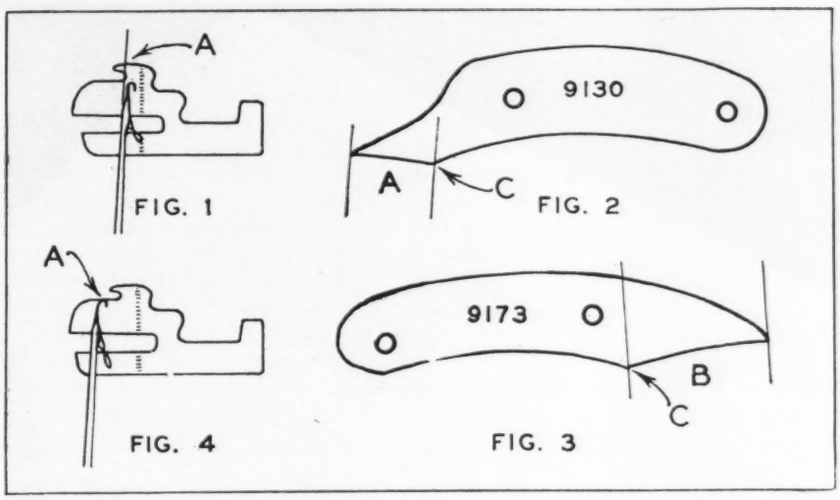
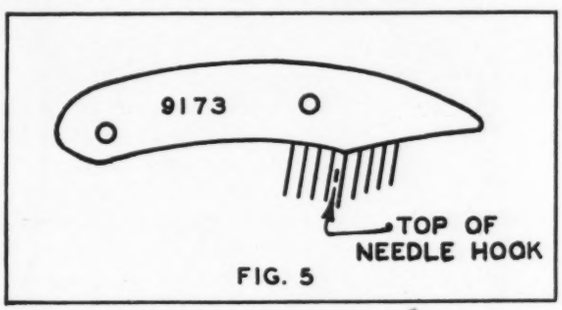
The Torrington Company, Guilford Bldg., Greensboro, N.C

The S. M. Supplies Co., 210 South Street, Boston, Mass.
Los Fabricantes Unidos, 964 Calle Belgrano, Buenos Aires
Factories at: Torrington, Conn.; Coventry, England; Upper Bedford, Quebec; Aachen, Germany.



making sinker cam and cap adjustments may be helpful.

Rack the machine around to a reciprocating position with the latch ring up and without the fabric on the needles. Set both the right and the left sinker cams to move the sinkers in far enough to bring the throat of the sinker even with the back of the needle as shown at A, Fig. 1, when the sinkers are on the highest point of the cams as shown at C, Figs. 2 and 3. Turn the machine slowly until the top of the hook of the first needle coming up from under the stitch cam (next to the needles in the elevated position) is even with the knitting ledge of the sinkers as shown at A, Fig. 4. Next adjust the sinker cap so that one sinker will be fully in on each side of the first needle coming up as shown in Fig. 5. Make the same adjustments in the same manner for both right and left sinker cams. That's all there is to it; try it and be convinced.



When making sinker cam and cap adjustments, bear in mind that the stitch or loop must not be forced inward while it is being formed. When the needle butt reaches the point of the stitch cam, the loop is completed, the needle then starts upward and the sinkers must move in far enough at the proper time to hold the loop off of the top of the needle hook or cast the stitch.

All sinker cams should be slightly hollow ground for best results. Fig. 2 shows a right hand sinker cam and Fig. 3 a left hand cam. A 5-inch grinding wheel will put a sufficient hollow in a sinker cam; the hollow portion should be over the entire face of the cam between the lines of A and B respectively.

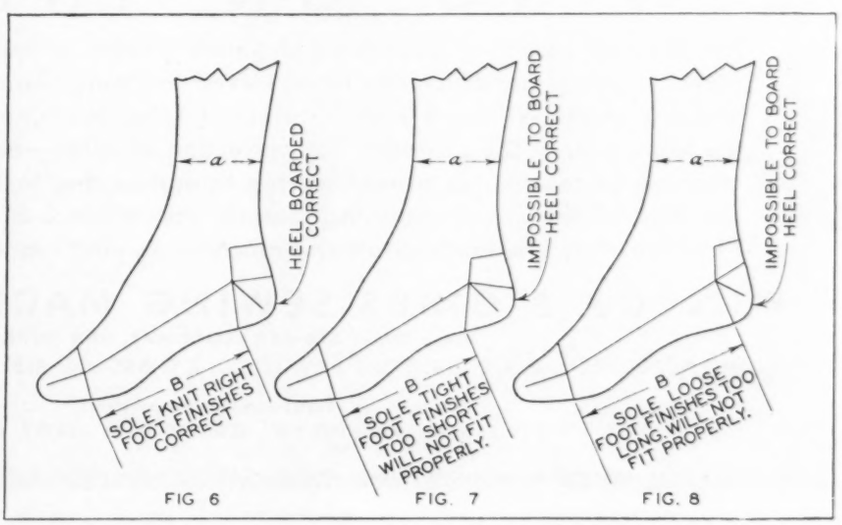
Slackening the Double Sole

Many fixers pay little or no attention to proper double sole slackening and then proceed to condemn the machine in no uncertain terms when they have trouble. The amount of slackening needed is governed to a great extent by the size, count," or kind of sole yarn used. Slackening also has a direct bearing on how tight the foot and ankle are knit. Improper amount of slackening will not only invite knitting troubles, but finishing troubles as well. Loose ankles and sloppy fitting ladies' hose are often caused by the double sole portion of the foot being knit ¼- to ½-inch too short. Even if the same number of chain links are used in the foot on a given number of machines on the same style, the double soles will have to be knit the same length in inches between the heel and toe to keep a uniform fit in the foot and a uniform amount of stretch in the ankle.

To illustrate this more clearly the 3 sketches herewith many be helpful. Fig. 6 shows a well fitting hose; Fig. 7 shows double sole too short (tight); and Fig. 8 shows double sole too loose (long). If the amount of stretch in inches at *a* in Fig. 7 and Fig. 8 is the same as in Fig. 6, the fault will be entirely at B; if the stretch at *a* in Fig. 7 and Fig. 8 is more or less than at *a* in Fig. 6, it is simply a case of poor fitting in the foot.

Proper sole slackening will also assure better plaiting in the high splice and sole especially on silk goods which are usually knit tight.

Correct adjustment of the sole slackening cam is very simple, yet like many other simple adjustments, it is often misunderstood. The slackening is accomplished by moving the high butt sinkers in earlier than the low butt sinkers, however, some fixers try to



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WE invite our readers to make use of this department for the discussion of any and all problems arising in connection with the knitting mill from the office to the packing and shipping departments. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. All questions will be answered as promptly as possible. The names and addresses of the contributors must be given but will be held in confidence and a pen name substituted when printed. All acceptable contributions other than questions will be paid for after publication. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

get more slackening by moving the high butt sinkers in deeper which is entirely wrong. *The slackening cam should move the sinkers in only as deep as the regular left hand sinker cam.* On some kinds of goods it may not be necessary to move the high butt sinkers in with the slackening cam as far as the regular sinker cam goes, but never deeper than the regular cam regardless of the kind of goods being knit.

Fig. 9 shows a slackening cam set in proper relation to the left hand sinker cam. Note at C how much earlier the high butt sinkers will begin to move in. Note the continuous curve in the slackening cam from C to A; it is shaped like the left sinker cam. Note also the inner point of the slackening cam A to B is *in* flush with the point of the left sinker cam and the area between A and B is shaped to correspond with the inner circle of the left sinker cam. Fitting up a slackening cam as shown in Fig. 9 assures 3 important points; first, the sinkers come in early; second, they move *in* the correct distance; and third, they are held in this position until they come in contact with the regular sinker cam as at A to B in Fig. 9.

Regardless of how much or how little double sole slackening may be needed or desired, it can be secured by increasing or decreasing the area of the slackening cam which projects in front of the left hand sinker cam. Remember when you need *more* slackening, bring the high butt sinkers *in earlier but not deeper.*

Stitch Cams

Much depends on the stitch cams on a Model K machine, or on any knitting machine for that matter. True, we need good needles and sinkers, sinker cams and a good cylinder on the Model K, but in addition to these we need stitch cams that are in A-1 condition if we intend to produce good hosiery at a reasonable cost. Many fixers neglect the stitch cams in their machines, not intentionally perhaps, but through lack of periodical attention.

Stitch cams, like many other machine parts, carry a full load constantly which spells wear and tear in capital letters. But do they receive a proportionate amount of attention during this steady grind—no, they do not and therein lies the neglect referred to previously?

The usual procedure is to let them alone until they actually give trouble and then to do something about it. That is one way of doing it; a far better way, however, is to go over stitch cams at regular intervals, re-point them, remove all nicks or rough places, keep the cams of even length, and renew cams when necessary. Stitch cams which are given thorough and regular attention will give a great deal more satisfactory service than those which are put in a machine and forgotten until they actually give trouble.

Often we find machine fixers who hesitate to renew a pair of stitch cams because they have been told that stitch cams are expensive. Just recently our boss gave my fixer friend, Sam, some sound advice as to the cost of stitch cams. Sam was having a heap of trouble with one of his 300-needle machines on silk work and our customary tight knitting in the heel and toe, ankle and foot, made it impossible to use badly worn stitch cams. After much plain and fancy fixing and adjusting (and a little cussin' too) Sam decided to renew the stitch cams. With the old cams in hand he went to the boss and requested new ones. The boss examined them carefully and asked what kind of trouble Sam was having. Sam replied that the cams wouldn't even make a good grade of waste, let alone good hosiery. "How long have these cams been in use, Sam?" said the boss. Sam passed him the card

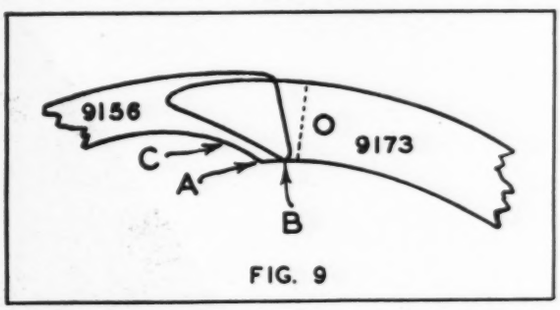

FIG. 9

showing the record of repairs (note: each machine had a card which showed dates of needle, sinker, and cam renewals, or other repairs). "According to this record these cams have been re-worked 3 times since they were put in—that's what I call getting real service out of a pair of stitch cams." Sam agreed that it was good service the cams had given but stated that he hated to scrap the cams because they are expensive. The boss told him not to worry about the price, only $2.42, because the old cams had paid for themselves and to continue to run them would cost the mill more in waste and seconds than it would to replace them. "In fact, new cams are cheap, Sam, and old worn-out cams are expensive as long as they remain in use. Pitch these old cams in the scrap pile and do the mill a favor by putting in some new cams. Remember, in order to make a profit we must produce more high grade first quality merchandise and less of that poor grade waste you mentioned."

As I write these lines my radio is saying "You're paying for a Packard, why not drive one." With apologies to the Packard hour, I will leave this thought—you are paying for good stitch cams, why not use them.

MATTHEW K. MITCHELL

(In the next article of this series, which will appear next month, there will be further information on the care of the stitch cam and other machine parts.—The Editors.)

"The seaman sets his sails to suit the wind."
PLAUTUS

. . . Because we want to improve our competitive position . . . Because we can no longer afford to waste time trying to squeeze a profit out of obsolete equipment! In production-for-profit, even those full-fashioned knitting machines that were new in 1930-31 are severely handicapped in competition with the speed, balance and flexibility of the new READING high-production Machines of 1937. Write us for facts—and figures.

TEXTILE MACHINE WORKS • READING, PA.

Preference to Athletes

EDITOR COTTON:

In the "KNITTING KINKS" section, we have been so engrossed in technical subjects, we have failed to give the psychological or human side the attention it deserves. So I am offering a few criticisms and suggestions for the mill baseball club.

The idea, of course, to encourage athletics in mills, is to develop the body and mind, promote loyalty, and furnish wholesome recreation for the employees. This is a beautiful theory, but in practice it does not always work out that way. It depends on how the athletes are handled.

Many mill men, in recent years have been so anxious to put out a winning baseball team they have imported players with a reputation, often at considerable expense to the mill, put them on the mill payroll whether they were needed or not, and possibly on a job some older employee was more capable of doing. That to my way of thinking, is too much enthusiasm and too little thinking on the part of the management.

What incentive has an ambitious employee who doesn't happen to be an athlete have to try to do his best work when he sees the ball players getting the breaks? Does that make him feel more loyal to the mill? Showing favoritism and failing to appreciate good and faithful service of a worker has caused many a good operative to lose confidence and respect for his employer. When a man loses confidence and respect for his boss he is meat for the professional agitator and communist.

Not so very long ago a hosiery mill I was connected with needed a catcher for their team. One was found, and not having any other place to put him on the payroll, it was decided to break him in in the boarding room. In order to make room for the new "receiver" a man who had been working in this department for a number of years, and as far as I know his work had been satisfactory, was layed off and in a time when jobs were hard to find. Of course, the foreman found some slight defect in this old boarder's work, but had he been a good ball player or a staunch supporter of the team, that would have been overlooked.

It doesn't take any stretch of the imagination to see this man's attitude toward the management of this mill. When an employee receives a raw deal like this and has looked in vain for work possibly for weeks, it is a very simple matter for the communist to convince him a working man hasn't a chance under the capitalistic form of government, and that nothing like that could happen to him under the Russian system.

I know a full-fashioned mill that wasted quite a lot of the stockholders' money last summer on a baseball club. Practically all the players were solicited even from other communities and given jobs as learners on full-fashioned machines at wages higher than the mill would have had to pay some other young people that really wanted to learn the trade.

Training full-fashioned knitters is a slow and expensive proposition. To put young men to learning this trade just to get them to play on the mill club is taking too much of a chance. Promising young baseball players are always in demand. What assurance has the mill these players will not join a rival club next season? Some professional club's scout may locate one or more of them and make them an attractive offer.

I have noticed these fellows that are induced into the mill for their athletic ability, are often not as efficient as the ones that are taken on to fill a vacancy. The reason is simple, a good batter or pitcher in the mill feels he has pull and can get by with what the other help could not, and he usually does.

If a knitting mill or any other industry hasn't enough boys and young men in its employ, with enough love for the game, to get out on the field and practice every day after work hours to make the team through their own efforts, then it would be better to give up the idea of having a mill team.

It is all right for the management to encourage outdoor sports, to a reasonable extent, and to assist in buying the uniforms and equipment, but it is not a good idea to run a knitting mill to support a semi-professional baseball club.

To the mill owner I would suggest, if you must have an all-star team and you don't have sufficient talent in your organization, hire the players outright and let them devote their whole time to the game. That would be more satisfactory than bringing them in the mill to get in the way, causing more deserving employees to become dissatisfied.

CONTRIBUTOR NO. 6629

Improving Full-Fashioned Selvage

EDITOR COTTON:

In looking through the May 1936 issue of COTTON I notice the question "How Can We Improve the Selvage?", submitted by "CONTRIBUTOR NO. 6492". This man states that his mill has changed their 42-gauge full-fashioned machines from a chiffon style to a 7-thread service weight style with a cotton heel, sole and toe and that in the footing operation they are getting very poor selvage on the inside sole where the silk and cotton knit together, and at this point the cotton throws a loop in the silk, causing the stocking to look unsightly.

Answering this query I should say that the cause, from the facts given, seems to point to a faulty catch-bar setting, and I suggest that if it is set to the right gauge, that the adjustable bit on the cam at the point where the new row of stitches is passing over the nose of the sinkers be raised sufficiently to stop the yarn from looping around the next sinker and not enough to cause a bad knit by extending the stitches at this point.

Another possibility is, that the needles when coming up are relatively too far back into the throats of the sinkers, thus causing an extra needle to pick up the selvage yarn. Adjustments can be made to either the catch-bar cam or presser cams at this point, depending on which set of cams the manufacturer has inserted the adjustment cam bit.

CONTRIBUTOR NO. 6675

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A change in production policy—the direct result of the increasing preference for finer gauge stockings—allows us to supply you with *hand-straightened* needles at the lowest price you ever paid for anything approaching this high standard of performance. Complete finishing is now a "standard" operation not a "special" job. For more firsts, fewer seconds and a clearer, sheerer fabric, get the new Royersford Standard Hand-Straightened Needles. Samples on request.

The prescription for better knitting

ROYERSFORD NEEDLE WORKS, INC., ROYERSFORD, PA. : : Spring-Beard Needles, Narrowing Points, Picot Points, Lace Points, Welt Hooks, Transfer Points, Stand Points, Bent Points, Dull Points : : Sinkers, Dividers, Jacks K.O. Bits : : Thread Holders, Carrier Tubes, Welt Bar Hooks, and eyelets, Strap Cleats, Plate Hooks, Footer Hooks, Strap Hooks : : R. F. Clamps and Straps, Legger Straps, Tension Wires, Snapper Springs. Mend Hooks—for all machines : : *For Glove and Underwear Industries*—Milanese, Tompkins and Tricot Needles, Milanese and Tompkins Guides, Tram Travelers : : Development work. SOUTHERN REPRESENTATIVES: Dave Blevin, Provident Bldg., Chattanooga, Tenn.; Robert Baker, O. Henry Hotel, Greensboro, N.C.

ROYERSFORD NEEDLES

THE KNIT GOODS MARKETS . .

Production and Shipments of Knit Goods Higher Than Year Ago—Warm Weather Helps Retail End but Primary Markets Hesitate as Cotton Drops

Philadelphia, June 16, 1937

ALTHOUGH new business has been smaller in knit goods lines manufacturers continue busy on the heavy volume of orders previously placed. Now warm weather is aiding retailers to get rid of stocks and most feel that the lull in re-ordering will not be long. Production and shipments of various types of knit goods continue at higher levels than a year ago despite the disappointments this spring. Declines in cotton and cotton yarns have brought about some hesitancy but as a rule prices of goods did not follow the raw market fully up and now are not expected to go off in proportion with yarns. Latest data from the Department of Commerce show that hosiery shipments as well as production are considerably ahead of this time last year while in underwear, mills are generally active with a good backlog of orders for fall. The effect of this large production, however, has been to clog the wholesale and retail fields in some sections and this is at present resulting in a quiet demand for new business so far as knitters are concerned but with retail business picking up the trade looks for this lull to be short.

New Business Slack

Full-fashioned hosiery knitters here and in the Reading section have been booking new business at a less active rate over the last month than any time this year, several of them having gone on shorter operating schedules. This has developed even though a large number of Philadelphia knitters, including the largest here, the Apex Hosiery Company, have been affected by strikes so that their production has been very much curtailed over this period. Activity in the Reading district has been holding up relatively better than that in Philadelphia but reports are that some of the Berks County mills are accumulating stocks. Knitters say this lull is a seasonal one and a natural reaction from the peak operating schedules that most mills followed during the first 3 months of the year when in a great many cases a less active demand is reported. Many buyers having bought freely during the first quarter have goods on hand or on order to last them several weeks.

There has been no general revision in hosiery prices but in several instances, cuts have been made with low-end goods selling at around $5.00 but representatives of standard quality mills declare they could dispose of their entire products through the end of the year at $5.25, which they have been refusing to accept. Manufacturers feel that if raw silk acts in accordance with expectation, unbranded goods will be up an average of at least 25 cents by October. Notwithstanding this decline in activity for the mills, manufacturers of branded lines say that none of the 5 months thus far this year could by any stretch of the imagination be termed a "bad" month, a condition in sharp contrast with the early months of other years. From the standpoint of earnings as well as volume, manufacturers are expected to show very satisfactory figures for the first half of this year even though the present month is showing a rather sharp falling off in sales. At the present the market can see no solid basis for either an advance or a reduction in the $6.35 minimum, when the new fall lines are introduced shortly. It is probable the new lines will be brought out at prices now prevailing.

Market at Low Point

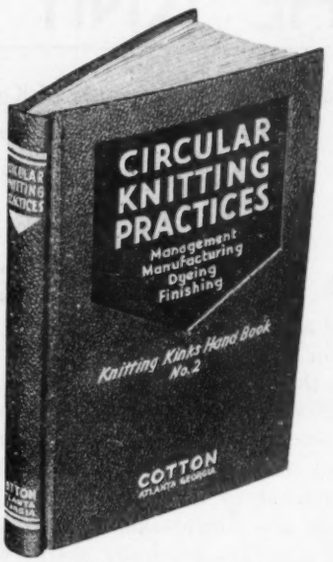
It has been reported that a number of chains and other large operators have been placing large orders for full-fashioned hosiery, some specifying deliveries through the end of the year and there has been other evidence that a fair number of other important buyers are about to operate. Some chains have taken advantage of very low prices obtainable from a few mills, while others have paid prices which mill representatives consider fair to secure coverage on good quality merchandise for a substantial portion of their fall requirements. While sellers assert it is possible to get $5.65 to $5.75 for standard quality 4-42 ringless goods, it is known that nearby deliveries of sub-standard merchandise of this description has been bought from a few mills at less than $5.00. Some observers have reached the conclusion that the market is about at its bottom for the year. They expect no further material decline in raw silk, wage scales are apt to be higher, with continuing labor trouble interfering with production.

Heavy orders have been placed by a number of chain stores on low-end anklets for next spring, this having proceeded to the point where some of the largest organizations in this field are reported practically through on cheap anklets for the coming spring. Manufacturers have taken such business in all cases with a clause on their order forms protecting them against increased cost through Federal legislation. While buyers of seamless generally do not appear excited over the proposed sweeping hour and wage legislation, probably because of the fact that its labor provisions will not become effective until 4 months after passage, mill representatives point out price advances on low-end goods would be sharp. If legislation is passed providing a maximum work-week of 40 hours and a minimum wage of 40 cents an hour, the advance would average well over 50 per cent on low-end goods, many knitters contend. When and if it becomes evident a bill of this nature is to be passed at the present session of congress, some in the market expect to see a repetition of the pre-NRA rush for goods, seen in 1933.

Because of this uncertainty, tentative plans for an early opening of new lines of infants' and children's novelty hose for next spring will not materialize, according to leading manufacturers in this field. Substantial business has already been placed by chain stores on 10-cent anklets for next spring, but no buying has apparently been done on higher priced goods, especially ingrains. Some large buyers have expressed interest in making commitments on novelty infants' socks and allied lines, although this interest is not yet general. Mill men point out in discussing business this far ahead, that they have no way of estimating the increased cost to be brought about by proposed Federal labor legislation, which they believe may be effective on at least a portion of their production for next spring. They feel it is important

How are you—

—Handling Yarn?
—Boarding Hosiery?
—DeGumming Silk Hosiery?
—Keeping Hosiery on Size?
—Lubricating Your Machines?
—Preventing Noise in Loopers?
—Gauging Your Worn Selector Fingers?
—Preventing Drop Stitches on Seamers?
—Selecting Colors for Hosiery Dyeing?
—Reducing Imperfects in Knitting Room?
—Routing Goods from Knitter to Dyehouse?
—Preventing Dirty Gores and Black Insteps?
—Attaching Elastic to Three-Quarter Length Hosiery?
—Setting Pattern Mechanism on Spiral Float Machines?
—Preventing Odds Accumulating in Finishing Department?
—Scouring and Dyeing Hosiery in Rayon Cotton Combinations?



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that both they and their customers know more about this legislation before definite prices are quoted.

A number of manufacturers say they have larger than usual orders on hand for fall goods and the pressure to open spring lines is consequently lessened. Because of the large volume of fall goods on their books, some mills will not be able to get into production on spring merchandise until October. Business on these will be taken on order forms containing a clause protecting manufacturers against increased cost through legislation. If uncertainties regarding new legislation are as great when orders are placed as they are now, this type of contract will not be satisfactory either to buyer or seller because of the possibility goods will be moved out of their intended retail brackets, with the possibility of cancellations.

Warm Weather Spurs Sales

Hosiery jobbers have been doing a good volume since the advent of warm weather, considerably ahead of this time last year in seasonal merchandise, such as anklets, seamless knee-length hosiery and men's slacks. Several such firms assert it has been necessary for them to place duplicate orders with knitters in men's slacks and one of the largest firms here in this group reports a larger demand for women's knee-length hosiery, with their largest volume in this type merchandise being a well-made seamless instead of full-fashioned. One active selling number with it has been knee-length hose to retail at 50 cents a pair, this being all silk, ringless, with crepe finish, Jacquard top and improved toe. A well-made seamless such as this, is filling the bill for most users of knee-length and in view of their very attractive appearance, jobbers say many of their customers do not seem to care whether their knee-lengths are full-fashioned or not.

Another warm-weather item which has been exceeding expectations, is men's slacks and jobbers say that a much heavier volume will be done on these lines this summer than any time previously. They say the popularity of this "comfortable hosiery" for men just got started last year and that their summer weather utility is spreading among consumers in rapid fashion. Some branded houses are expressing dissatisfaction with the way knee-lengths are moving, but it is pointed out the increased knee-length production this year may account for some of this dissatisfaction. Novelty constructions are doing quite good, the point appearing to be that where the stocking offers the wearer something definite in fashion aside from its novelty character, the number has been selling. Branded houses say that crepe numbers have entrenched themselves so solidly that they seem now to have lost their ability to make news. Styles retailing at the $1.00 level are going extremely well and there is also good interest, even in the finer gauge higher-priced numbers so that taking the situation all in all, branded manufacturers have little to complain about regarding business so far this year, even though June will be the poorest month of the year.

Most of the complaints regarding price weakness on hosiery during the present month has been experienced in the primary market largely on so-called low-end merchandise, the cheapest goods in each division of the market. This is particularly true of women's full-fashioned stockings and men's fancy half-hose. Generally speaking, better-type goods in the medium price ranges have been firmer than those selling at the lowest figures and manufacturers' need for business on them does not appear to have been nearly as pressing as on strictly low-end goods. This appears to be confirmation of the theory that as the depression lifts and people have more money to spend, many of them have increased their purchases of medium and higher priced hosiery, causing a restriction of the market for merchandise at the bottom of the price scale. In view of this, some of the best stores have shifted their merchandising emphasis from the very lowest prices to higher brackets.

Closing of Apex Plant by Union Held Not Interference with Interstate Commerce

PHILADELPHIA—Action taken in the Federal Courts here by the Apex Hosiery Company, largest full-fashioned plant here, to oust 250 sit-down strikers from its mill, was significant to the entire hosiery industry. The strikers took possession of the Apex mill May 6, and early in June the company filed suit in the Federal District Court for an injunction claiming they interfered with interstate commerce. At the same time the company filed a damage suit, claiming treble damages under the Clayton Act of 1914 of $3,000,000. The company listed damages of $50,000 when the strikers broke into its plant, May 6; $100,000 injury to machinery; $300,000 loss through its inability to deliver goods on contracts; $50,000 loss through fixed charge losses and $500,000 for the loss of good-will of its customers resulting from the long closing of its plant. Federal Judge William H. Kirkpatrick in the Federal District Court dismissed the injunction suit June 5, saying he had no jurisdiction in the matter as interstate commerce had not been seriously affected by the Apex situation. However, he said the sit-down strikers were clearly trespassers and violators of the laws of Pennsylvania. He said the Federal Court could not remedy this because it was a state matter. Attorneys for the company immediately filed an appeal to the Federal Circuit Court of Appeals. Its damage suit will not be heard for some time yet.

(As this issue goes to press, word comes that the U. S. Circuit Court of Appeals has issued an injunction to the Apex company prohibiting the sit-downers from further interfering with the business of the company. The laws involved were the Sherman Act and the Wagner Bill. The latter act of Congress definitely sets forth a procedure by which labor shall bargain, without resorting to force or the passive sit-down strike. This action by the court is the first taken by the Federal government in the series of sit-down strikes that have swept the country. It is especially significant in that this court ranks next to the Supreme Court. It is expeced that the repercussion of the decision will have effect on future strikes of this nature.)

Chains Advance Price

Although some manufacturers have been quoting lower prices on low-end hosiery during recent weeks, price advances have been recently put into effect by some of the largest chains. One lifted its prices another 5 cents a pair, bringing the figure to 60 cents, indicating a total advance since the first of the year of 10 cents a pair. It is probably a better value is being given the public, but a firmer position in manufacturing costs is really behind the move. A shoe chain that makes strong competition for all retailers of this merchandise early this month went back to a 49-cent price after figuring a 45-cent number for two weeks of lower quality construction and it was significant that this change gave notice that the price was for a limited time. These advances by such competitive distributors indicate the trend of the market where manufacturers are encountering higher production costs of various kinds. Settlements with unions after strikes and sit-downs have meant higher costs and now new wage and hour legislation is accepted as meaning a further advance in production costs. Manufacturers also point out the raw silk market is higher by about 30 cents a pound than this time a year ago.

Another development pointing the way toward higher full-fashioned hosiery prices has been the negotiation for a new national agreement and wage increases between the Full-Fashioned Hosiery Manufacturers of America, Inc., and the American Federation of Hosiery

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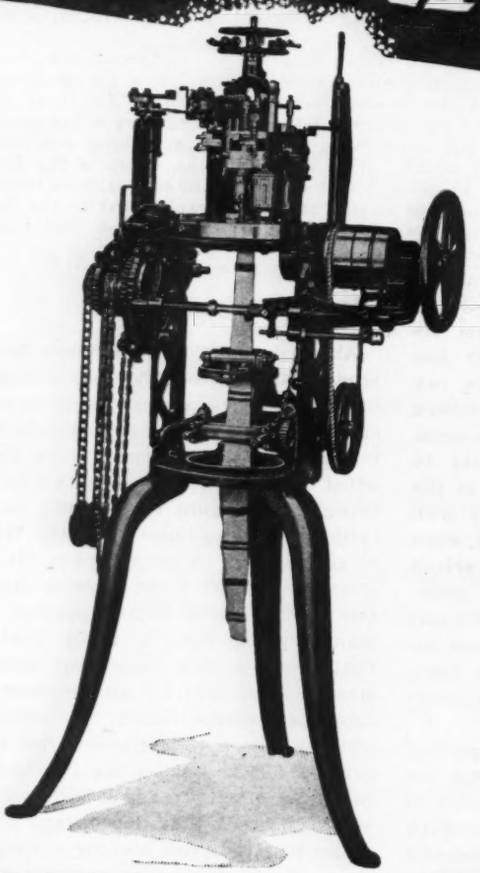

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Workers. When these negotiations were opened early this month, Emil Rieve, president of the hosiery union, presented the union's demands for higher wages and at the middle of the month, officials of the manufacturers' association stated that a tentative agreement had been reached providing for wage increases which are to become effective August 1. Although no official announcement has been made up to this time, it is reported wage advances averaging 12½ per cent and ranging from 6 to 25 per cent will become effective. An official of the manufacturers' group said that under the new pact, minimum wages paid to auxiliary workers will be advanced with a minimum of $15.00 a week, becoming effective in some instances on this type labor. What effect this will have on the general wage scale of the full-fashioned industry is still uncertain, but that it will mean higher wages in many mills, other than those directly affected by the negotiation is clear. In the past, open-shop manufacturers in the North have been paying approximately the closed-shop scale of wages and the trade feels that that policy will be continued so that this will mean most of the full-fashioned industry of the North will be paying higher wages, beginning August 1, or shortly thereafter.

The Textile Machine Works in its 1937 statistical folder, state that 4-thread stockings account for nearly 50 per cent of all sales of full-fashioned hosiery and 3-thread for about 30 per cent; 7-thread takes more than 10 per cent and 2-thread, 5-thread and 8 to 10-thread combined account for less than 10 per cent of total sales. The folder also points out over 56 per cent of the 15,800 full-fashioned knitting machines in place in the United States as of January 1937, operated by 358 mills are over 10 years old and that the 24-section 45-gauge machine showed the largest percentage of installations in 1936, with the southern states again leading in the number of machines erected.

Geographical Capacity of FF

Geographical capacity of the full-fashioned industry is divided as follows: Philadelphia, 21 per cent; other Pennsylvania, 32 per cent; South, 20 per cent; West 15 per cent; New England, New York and New Jersey 12 per cent. During the last few years, about 50 mills moved out of the Philadelphia territory, the article states, accounting for a net loss of more than 600 machines. A total of 67 new full-fashioned mills have been established since 1935, during which time 28 mills were liquidated. The folder estimates the per capita consumption of full-fashioned stockings by females over 15 years old at about 9 pairs per year. This means, it is stated, that the average woman does not spend more than 60 cents per month for her full-fashioned stockings. It points out that shipments of knee-length full-fashioned stockings in 1936 represented only about 4 per cent of the total, but that shipments were twice as large as in 1935.

There was a decline in the imports of cotton hosiery this April compared with the same month last year for the first time since foreign goods became an important factor in competition with the domestic industry. Imports of cotton hosiery in April were 169,957 dozens compared with 178,504 dozens the same month last year, according to figures of the Department of Commerce. The imports for the month from Japan likewise showed the turn in the trend, the figure being 144,684 dozens of cotton hosiery compared with 150,994 dozens in April of 1936. During the first four months of this year, total imports of cotton hosiery amounted to 808,581 dozen pairs, which represented a substantial gain over the 568,969 dozen pairs imported during the first four months of 1936. Imports of cotton hosiery from Japan for the first 4 months of this year were about 200,000 pairs greater than imports from that source during the first 4 months of 1936.

Japanese News

Cotton hosiery imports from Japan during April were estimated to form 21.1 per cent of the total production of comparable types in the United States. Advancing prices on men's hosiery numbers coming into this country from Japan, are proving a factor in cutting down imports of certain goods that have been highly competitive with similar merchandise made in the mills of this country. Staple numbers of acetate yarn construction that for several years have cut into the domestic trade and that last season could be landed here at low prices, are now up 5 or 6 cents a dozen c.i.f. The landed price with tariff and other charges make them still lower than domestic hosiery but the difference being less most buyers are now willing to give preference to the American-made hosiery. Under the quota arranged by the manufacturers association here, with the Japanese industry, imports for this year are set at a figure that is 30 per cent below the high of last year.

Mill Capitulates to Union Demands

PHILADELPHIA—Open shop interests in the local full-fashioned hosiery trade were surprised when the 5-week sit-down strike at the Artcraft Hosiery Company plant here, employing almost 800 workers, ended in a closed shop agreement with the union. Previously this plant had been one of the most active in the so-called open shop group. The new agreement signed late last month as announced by William Leader, head of the Philadelphia branch of the hosiery union called for union wage rates, union working conditions, the checkoff and agreement to end the "stretch-out". One of the union charges was that knitters were compelled to tend to more than one machine. Leader added that the signing up of the Artcraft was the eighteenth local mill to sign a closed shop agreement since early this year but other interests including the National Association of Hosiery Manufacturers reported that the number of employees in all was more than offset by the number employed at Apex Hosiery Company, which so far has refused to sign any closed shop agreement although agreeing that it is willing to sign a union agreement without such clauses.

Inroads made upon the open-shop full-fashioned hosiery plants in the Philadelphia area by union organizing campaigns have been extensive since the beginning of the year. The most significant gain in this respect by the union during the last month was in the agreement signed by the Artcraft Hosiery Company late in May. This was one of the large open-shop mills here but the union announced signing a contract meeting virtually every union demand. Its provisions include union wages, hours and working conditions, the check-off and an agreement to end the stretch-out. On June 10 operations were resumed at the Oscar Nebel Company plant at Hatboro, Pa., after a several weeks sit-down strike. In this case, also, the union claimed it provided for a closed shop, with the check-off and other provision of the standard Philadelphia contract. Union leaders claim that 19 similar closed shop contracts had been signed by it in the Philadelphia area since the organization drive started January 11.

Chalmers Promoted

Keith Chalmers, manager of the San Francisco branch of the Holeproof Hosiery Company, has been elevated to manager of the New York office. Mr. Chalmers is succeeded at San Francisco by E. Gallagher, formerly head of the northwest interests of the company. These men have been with Holeproof for over 20 years.

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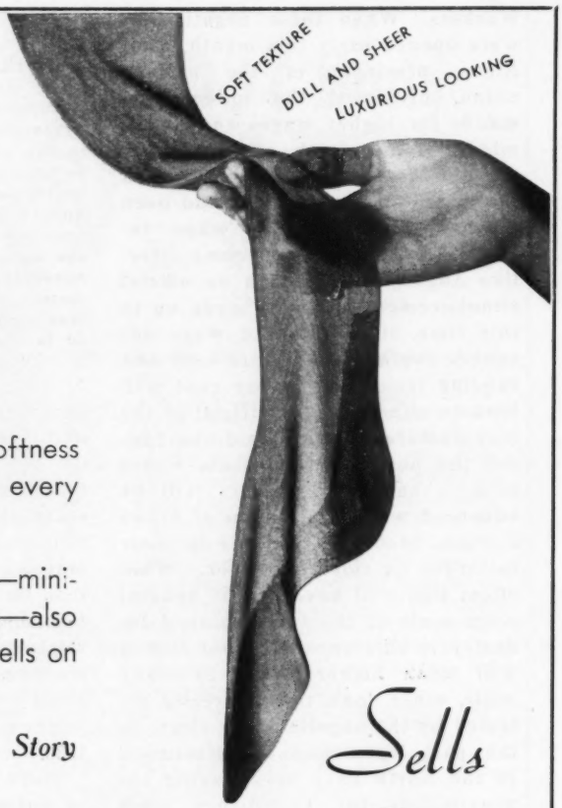

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Warm Weather Quickens Lightweight Underwear. Higher Operating Costs Offset Lower Cotton

During the latter half of May underwear manufacturers were discouraged over the lightweight outlook but warmer weather in June has changed the picture materially. A considerable volume of new orders, some of them of real size, have been booked for prompt delivery, coming from all kinds of distributors, wholesalers as well as chains and mail-order houses. The underwear market is largely dependent on weather no matter whether the spring or fall season business is at stake, so that the warm temperatures experienced this month have been an important factor and manufacturers that were quite blue over the situation two weeks ago have completely changed. Wholesalers that were facing stocks that looked very large a short time ago are now seeing these inventories melt away, with the necessity of turning to manufacturers to size up stocks.

The market has been taking note of the drastic drop in raw cotton, prices being off at one time almost 3 cents from the 1937 peak but there have been no serious results in the form of price weakening of underwear. Several mills making athletic shirts have made minor adjustments in their prices in line with the change in the raw material. One large southern mill reduced prices of different numbers of men's combed underwear from 2½ cents a dozen to 7½, but the new prices were still above the opening ones. While buyers were naturally somewhat concerned at first over such changes, most of them quickly began to appreciate that the market as a whole continued to show firmness and it is now a question of taking full advantage of the wholesale and retail demand for lightweight underwear by getting out deliveries to meet it.

The impression among underwear manufacturers and distributors is that changes in the raw material are going to be offset by higher mill costs, such as labor. The industry feels that eventually there is going to be a new regulatory act by the government which cannot help meeting higher costs. Furthermore, the progress in unionizing the industry continues in different sections meaning further increased costs. In this connection, it is evident that large buyers see the possible effect on orders they have with mills for the fall season. The result in some cases has been that these buyers want to get in fall goods on time and frequently earlier than specified. Some mills are allowing an anticipation interest rate of 4 per cent where merchandise is actually being taken in ahead of the regular delivery dates first given. By the end of this month the market will have a better estimate of the results of the current spring business. Lightweight underwear numbers of many kinds sell the year round and a large quantity of goods is sold by wholesalers all through the summer, but the first of July means the dividing line between the spring and the fall seasons so that by that time both manufacturer and wholesaler know what to expect for the future. If the wholesaler carries over any quantity of merchandise, it means that buying for the next lightweight season is going to be affected accordingly.

While manufacturers have started to get lines ready for next spring, market comment about the new season is one of indifference on the part of both buyer and seller. Outside of the necessity of wholesalers reducing present stocks, there are too many uncertainties for the manufacturer to make prices so far ahead. On this basis, therefore, it will be at least Labor Day before a general move is made by man-

ufacturers to show next spring lines. There are a number of underwear mills in the industry at the point, however, where they not only need more lightweight business but also new orders to carry them further into the fall. This situation applies to smaller mills making women's and children's goods. Some of the mills needing new spring business have made some changes from the top quotations but are still asking prices considerably above the low. They have found that it is not a question of price at present, as many buyers are not interested to re-order at any price.

One of the large southern mills a week ago sent out a new price list, reducing quotations slightly on different numbers of men's combed athletic shirts and union suits for spring. The letter to the trade stated that on account of the recession in the combed yarn market, it was possible to adjust prices on these numbers. The changes made are from a previous list of April 3. Several numbers of men's athletic shirts are quoted in the new list of $1.62½ a dozen, which represented a reduction of 5 cents a dozen. These prices do not, however, take quotations below the opening of the season last fall. Other mills have been quoting as low as $1.62½ on a Swiss ribbed combed shirt. New business coming in men's numbers includes a good percentage of different numbers of men's knit shorts. This type continues to sell in a large way, with the chains in particular doing a good business.

In connection with the current prices on knit underwear, some buyers have gotten the idea that prices should be lower than they are. The recent decline in cotton with a proportionate drop in yarns has given them this impression but when yarn prices for the period when underwear mills first made their spring prices are looked up, it is found that today's yarn prices are still considerably higher. Taking the combed numbers going into men's athletic shirts, it is found that the quotation last fall when spring lines were opened, was 37 cents, while today's level is 41 cents, or at least 4 cents above the low. Yarn prices have dropped from a high of 47 cents on the combed number but are still well above the prices on which underwear was based originally for this season.

The popular knitted polo shirts for men and boys have been moving in an active way over the retail counters. Business with department stores, chain and smaller retailers, has shown the hoped-for seasonal activity. The production of the sport shirt has been much heavier than ever before throughout the knitting industry with a number of manufacturers making special numbers reporting a large business with chains and wholesalers. The future of this knitted garment is looked upon as assured, though production may not be as widespread another season, since some manufacturers have found the business unprofitable this year.

Underwear production continues at a higher-than-average rate among some of the largest mills which have been running steadily now for at least 3 months on next fall merchandise, mostly men's numbers, in addition to taking care of their regular spring business. While it is known that some mills are rapidly completing their fall orders, others are expected to ship for some months ahead. The fall end of the business at this time looks just as satisfactory as at any time selling began the first of the year. Buyers appreciate that they own their goods at cheap prices compared with what mills would have to quote and are quoting today in many instances for further business.

Underwear mill executives see nothing but a firm market in the situation created by the Administration's move for a wage and hour law for industry. These manufacturers looking at the matter from past experience, appreciate that Government control of any nature inevitably means higher production costs which necessarily have to be passed on to the price of the product. Underwear manufacturers hope their prices will not reach the point where they will encounter buyer resistance on the part of the public.

Contract Between Full-Fashioned Group and Union Effected

PHILADELPHIA—The Full-Fashioned Hosiery Manufacturers of America, Inc., following negotiations with the American Federation of Hosiery Workers announced that the basis of a new contract had been reached with the union, the new pact to become effective August 1. Wage increases are provided for with estimates being that they will range from 6 per cent up with some saying they will average 10 per cent but others say the main group affected by it will be "auxiliary workers" while knitters' rates will not be changed much. Joseph Haines, Jr., secretary of the group said at the time of writing the details of the new agreement could not be published as his members had not approved of them formally. If the past is a criterion this means that the open shop group of manufacturers that formerly represented about 60 per cent of the machine capacity of the industry will follow suit and this in turn would mean that practically all of the full-fashioned industry in the North will, beginning August 1 or shortly thereafter, be paying higher wages. Manufacturers say this will result in increases in hosiery prices but not to an important extent.

Review of the Yarn Markets

(Continued from page 126)

also because of reports from retailers that their volume in women's low-end rayon underwear has been smaller than they expected. There was a fair demand from half-hose manufacturers for August delivery yarn, knit goods jobbers reporting a good volume at present in these numbers and especially in men's rayon slacks. These garments are receiving a wider acceptance this season as a warm weather item and volume in them is expected to be well over that of a year ago.

Silk

After touching a low point for the present year early in June, silk has been firmer and several cents above the low of that time. Some hosiery manufacturers feel that the present price range is an attractive one and buying for a couple of months ahead has been heavier. One of the factors operating against a rise in the silk market has been the large number of strikes among full-fashioned hosiery plants in the Philadelphia area but this has not been felt as keenly as it would have been a couple of months ago, when new business was being placed in hosiery at a more active rate. Statistics showed a decline in raw silk consumption by American mills during May but these show a gain over the corresponding months of 1936. May takings this year were 3,191 bales higher than in May of last year. They showed mill takings of 35,278 bales and stocks here of 41,302 bales. Silk in transit at the end of the month amounted to 33,700 bales. Leading dealers feel that while the May figures could have been somewhat better, but they would not have been very much surprised had the showing been decidedly worse, pointing out that higher price levels prevailed for raw silk last month than during the 1936 corresponding month.

Although warehouse stocks were larger at the beginning of this month than at the beginning of May or at the corresponding time last year, they are far from unwieldly and can be readily absorbed by a spurt of good buying activities. A valuable addition to available raw silk statistics has been made by the decision of the National Association of Hosiery Manufacturers to make public monthly estimates on consumption of raw silk by the domestic hosiery industry, figures that heretofore have not been available. The percentage of raw silk consumed by the hosiery industry has been rising steadily from 47.97 per cent in 1933-1934 to 58.24 per cent during the first ten months of 1936-37.

REVIEW OF THE YARN MARKETS

All Types of Yarns Dull Except Rayon. Prices of Cotton Yarns Suffer Drastic Decline. Hand-to-Mouth Coverage Reappears

Philadelphia, June 16, 1937

THE LAST FOUR WEEKS have been unfavorable ones for all yarn sellers except rayon. Cotton yarn producers have not only seen the decline in raw cotton take away higher prices of yarns but they have also experienced a drastic narrowing of their spinning margins, yarn prices declining much further and faster than the raw market. In silk prices have given a good account of themselves and show no marked change but buying has not been heavy. In worsted yarns dullness and easy prices prevail. In rayon when books were opened for August delivery orders demand was just as great as in any recent month, some weavers being very active now on fall goods fearing a strike later.

Cotton Yarns

Cotton yarn prices have declined rapidly and extensively this month, some counts dropping back to a level not much higher than a year ago when cotton was lower. The most rapid declines have occurred in two-ply carded weaving yarns which were the most spectacular performers during the upturn of the latter part of 1936 and during the early months of the present year. During most of that time ply carded advanced so fast that it outstripped carded single and at times there was a difference of 5 or 6 cents when the normal differential between the same count in single and ply was only a couple of cents.

Not only have prices of carded yarns gone off but combed have eased also. Mercerizers have not announced a price change, saying the decline in combed has not yet been large enough to warrant their making any change in prices. The real reason, others say, is that processors do not believe the time is ripe, saying that a cut in mercerized now would not result in booking new business. Manufacturers have changed their buying tactics from late last year and early this. At that time they favored buying ahead when prices of commodities were strong.

With commodities easing over recent weeks most have changed and now favor a hand-to-mouth buying policy. This, however, may be changed if they see conditions in the raw markets advance again. In the meantime manufacturers in most lines of activity are booking new goods orders at lower rates and they have not so much need for yarns. Their consumption of yarns has gone off and they favor only nearby coverage. This means spinners have been booking little in the way of new business this month and that they are shipping out possibly 30 per cent less on old contracts.

Spinners at the middle of June were beginning to realize that further cutting of prices was not worth while, that the volume of business obtainable even at large concessions was so small that it did not pay spinners to indulge in this practice. This made the price situation at that time somewhat steadier but yarns are being affected by the thought of the trade that the large cotton acreage planted this year may result in a large crop. Cotton futures have gone off almost 3 cents in the last few weeks largely on this and some counts of cotton yarns such as 20s two-ply have declined as much as 7 cents in the same period which is a large decline for so short a period. This in turn is affecting the goods markets and buyers there are now waiting.

Combed Yarn

While combed yarn prices have weakened noticeably there has been no such weakness as in the ply carded. Spinners in most instances have combed orders on their books well into September and they see no reason to quote exceptionally low prices now because manufacturers they say would not buy at any price. In view of this larger spinners have not been meeting the low ideas of some smaller producers that do not have the resources to withstand a prolonged dull period. Some of the latter have quoted single combed at prices about 6 cents off from the 1937 peak..

Worsted

Worsted yarns have been quiet this month and prices while not changing materially are easy. Wool has been holding better than last month and in fact showing a firmer tone but this is not reflected in yarns and when spinners want immediate new business they must cut prices to get it. There are fewer new goods orders coming through which together with softness in yarn prices has caused most buyers to refuse to operate in any except fill-in lots. Mens' wear weavers are fairly active on old orders but are running on old yarn orders and even though low prices are obtainable in yarns they have been refusing to contract ahead.

Outerwear knitters are not busy and they are not placing fall goods requirements in the yarn market asserting there are too many uncertainties at present in their own and all business. So they feel the fall season will be late in getting under way.

In addition to the general uncertainty knitters say they are confronted with more competition this season from woven materials, this being very evident in the bathing-suit end where a considerable amount of business has been switched into suits made of woven material, either cotton, silk or rayon and in such garments, the quantity of worsted yarns used is small, being limited to a small lining which is made from worsted yarns. Bathing suit manufacturers report that while they have had a fair season in worsted garments made from single-dyed yarns, their volume has not been quite as good as that last year, due to this woven competition. Swimsuit knitters add that their repeat orders at this time are very small so that practically all of them are through with the season's output and they will not resume operations on a broad scale until they book fall and winter sport coat business.

The use of cheapener yarns in fall outerwear will be large due to reports from retailers that consumers are resisting higher prices in such lines. In fact, retailers say that in recent months demand for outerwear has been tapering off even before consumers were confronted with prices based on the recent higher level touched by worsted yarns. To get around this, many manufacturers are turning out garments in which a larger percentage of cotton and rayon is used so that the consumer will not have to pay higher prices than a year ago but at the same time will be getting a garment in which a smaller percentage of worsted yarn has been used.

Rayon

Despite a slowing up in demand for other type yarns, when producers open their books at the beginning of this month for the booking of August delivery business, they experienced a demand for rayon yarns as good as that of any recent month, which means that demand for yarns of this character is approximately at peak levels for the present year and with producers being unable to meet all the demand. When producers opened their books at the beginning of the month they experienced a smaller demand from hosiery and underwear manufacturers but the poundage which was released by this was more than offset by a larger inquiry from the weaving trade, which takes approximately 70 per cent of the production. Larger poundage taken this month by the weaving trade was partly due to the expectation that a general strike of silk weavers will be called within the next few weeks and to accumulate stocks of goods for the fall season, many of these manufacturers are operating over time so that if a strike does occur, they will be in possession of enough goods to start them on the fall season.

On the other hand, there was a less active call from the knitting trade and particularly from the underwear end because of the accumulation of some stock of circular knit underwear, due to the active run which these manufacturers have had for several months past and

(Continued on page 125)

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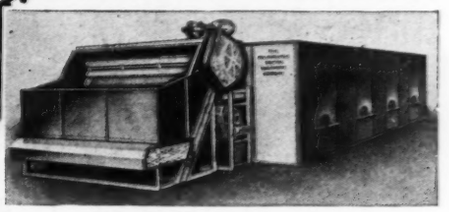

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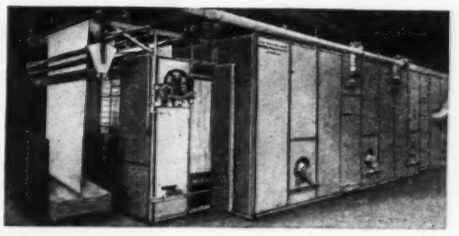

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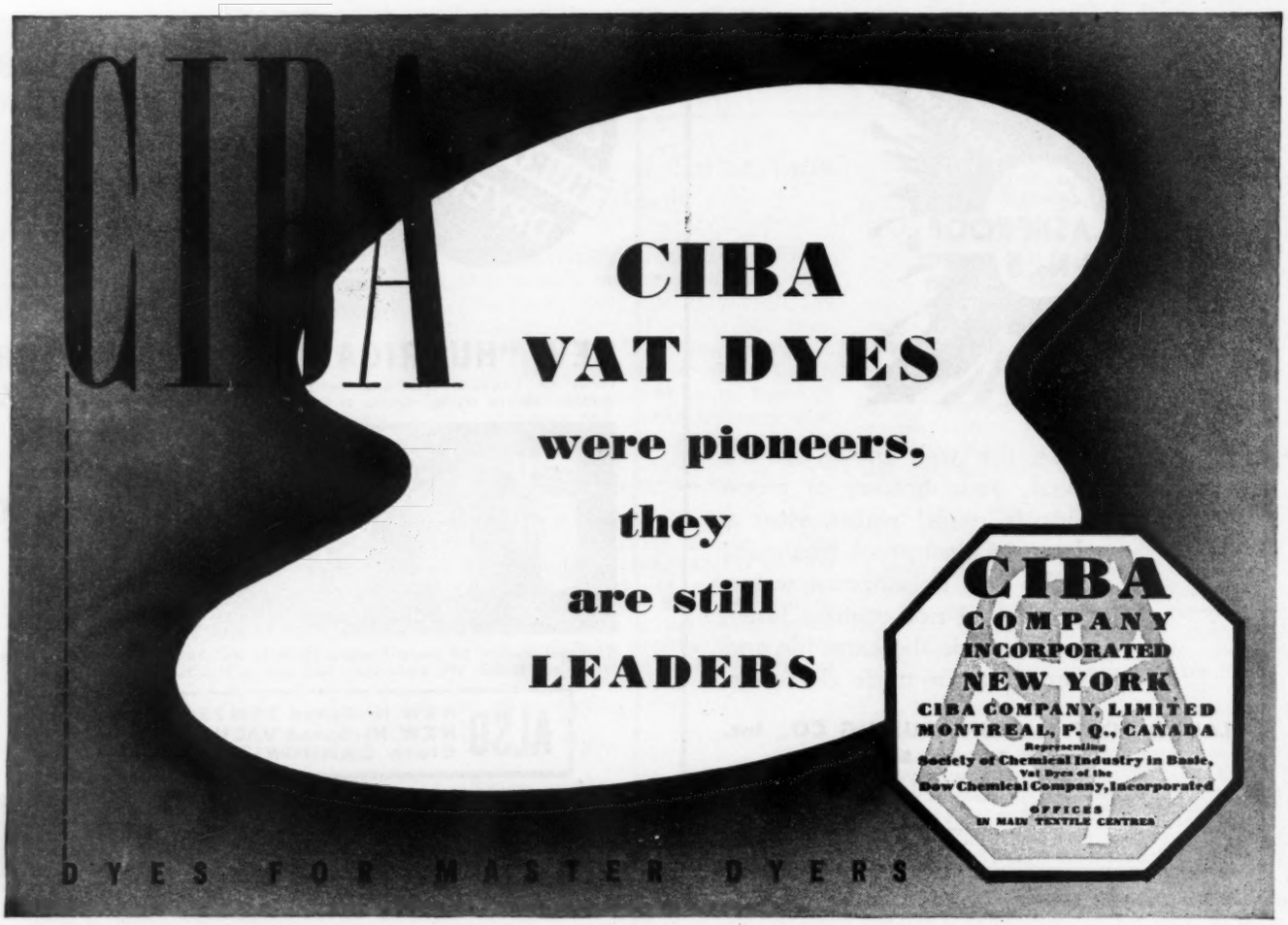

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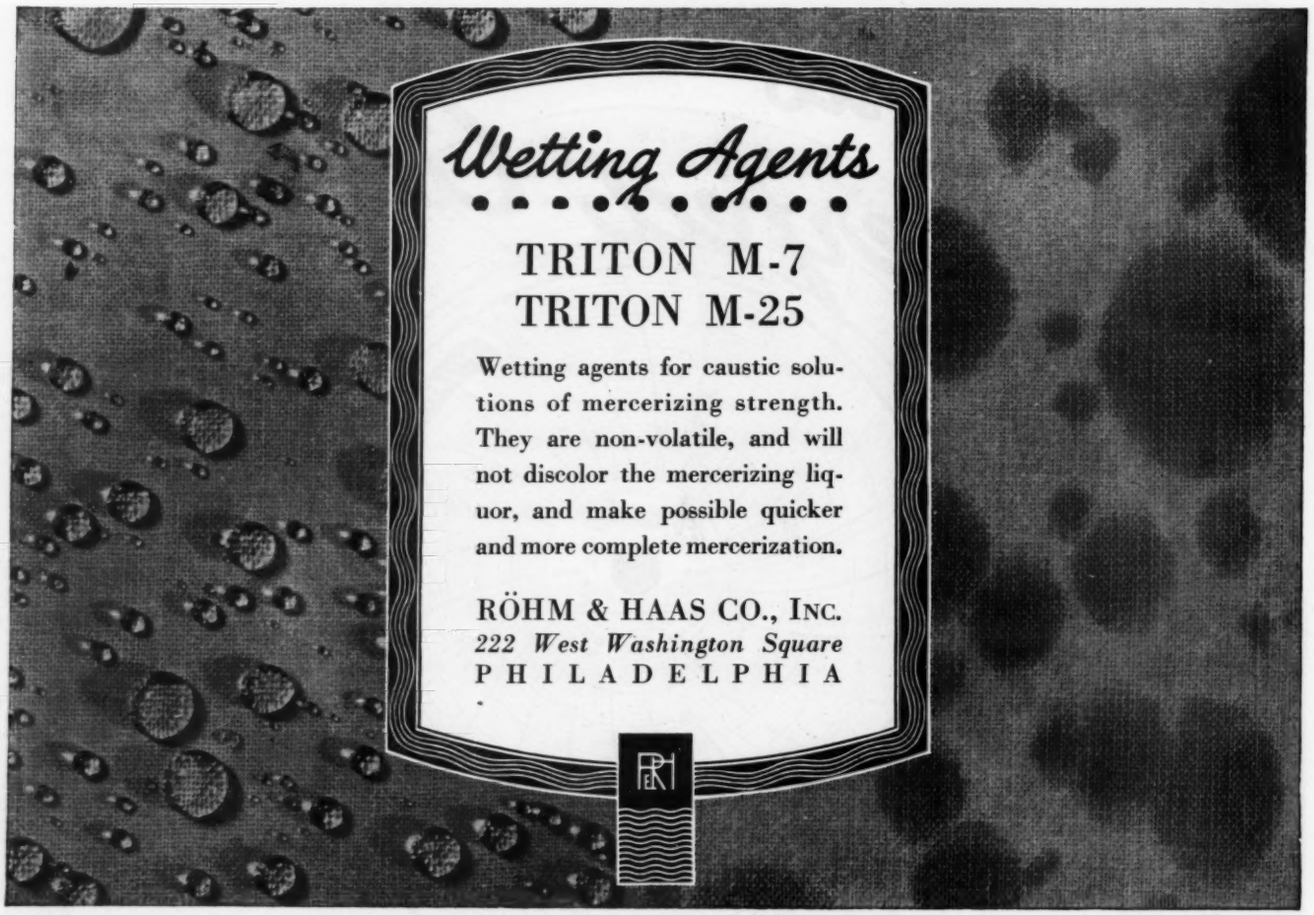
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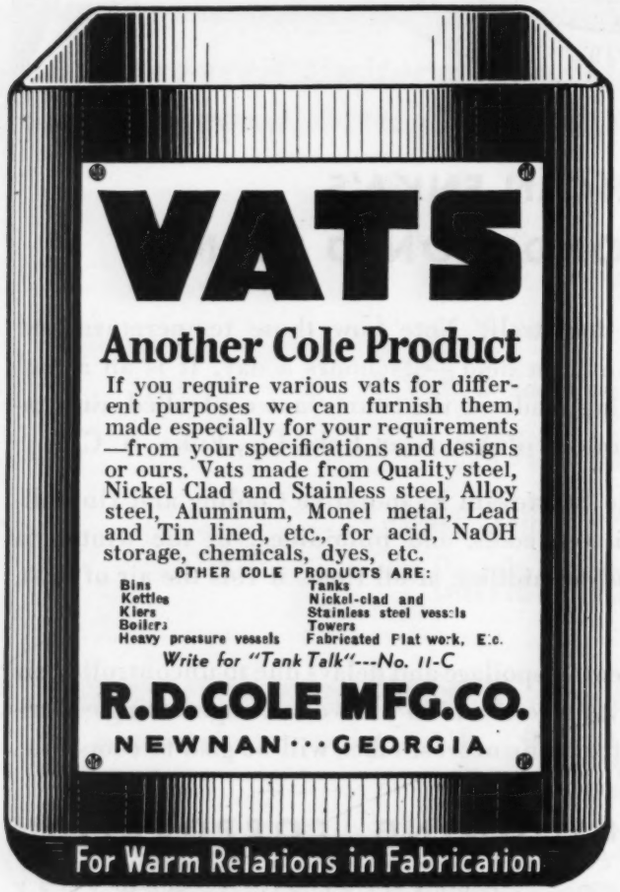
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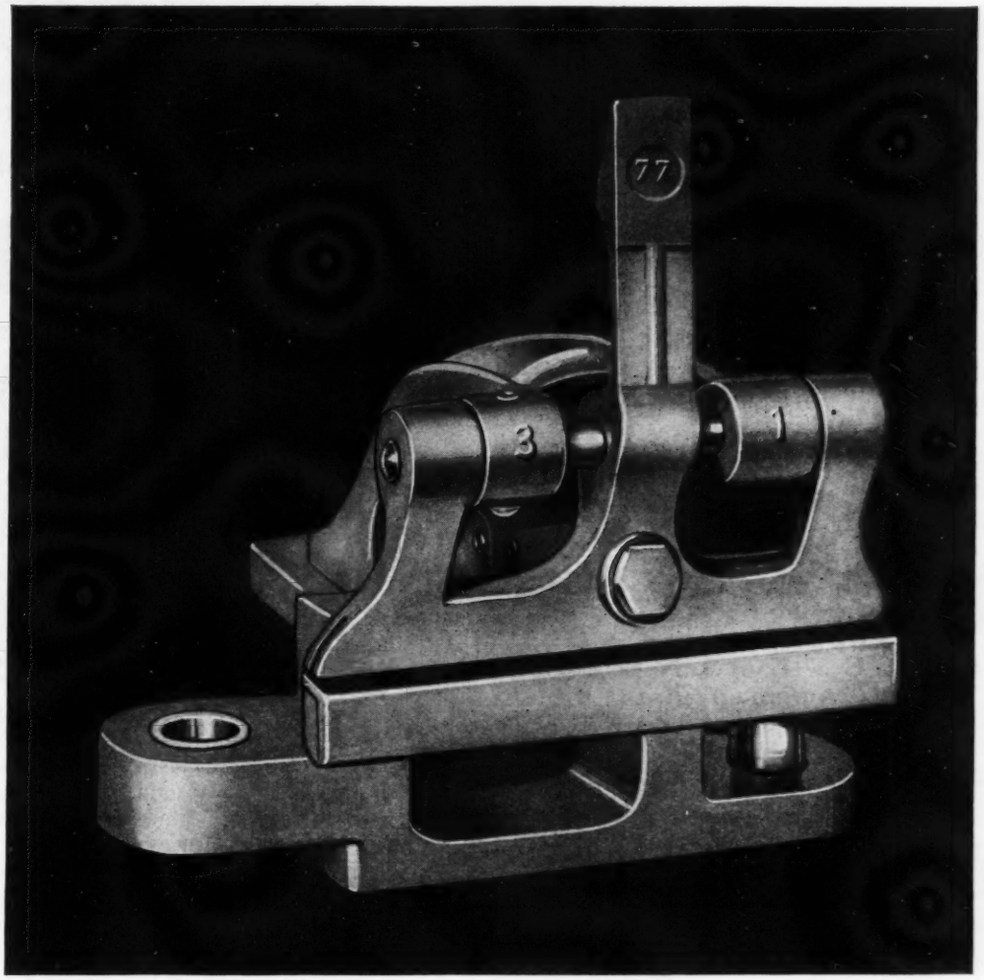

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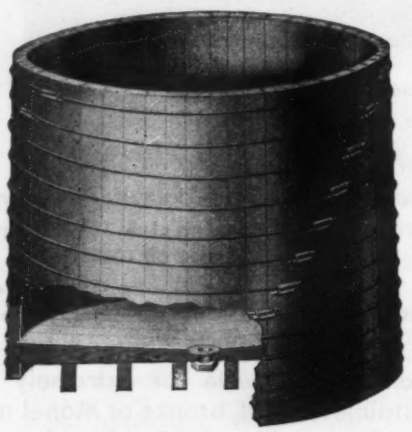

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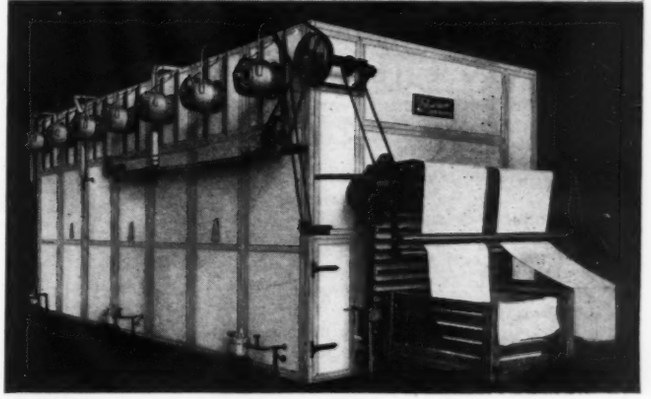

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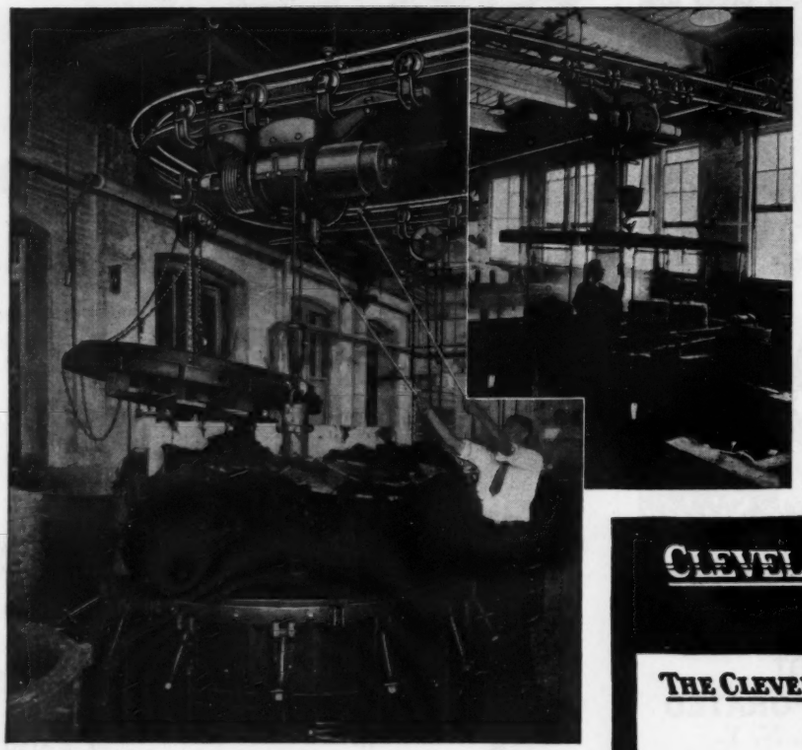

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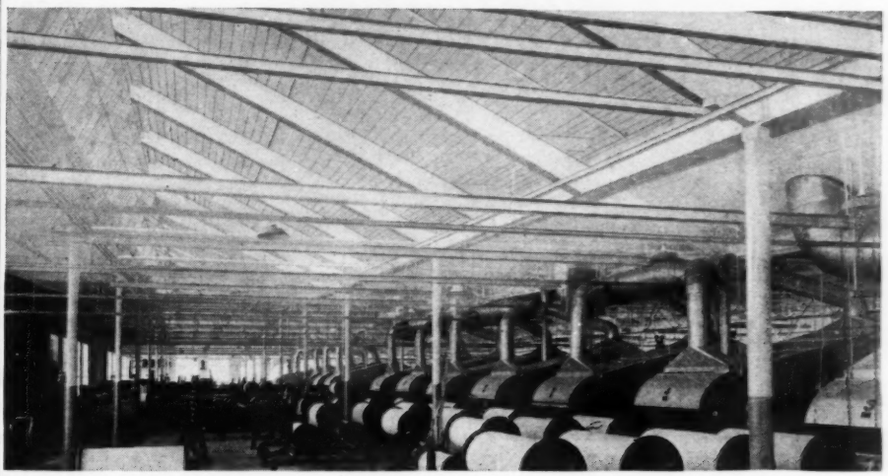

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KENYON'S ENDLESS WOOLEN BLANKETS

Fully 25% of All Cotton Textile Spindles in the United States are Operated on the Loper System.

Ralph E. Loper Co.
INDUSTRIAL ENGINEERS

Specialists in Textile Costs Over 24 Years
FALL RIVER, MASS. GREENVILLE, S. C.

"Smoother than Grease"
Since 1890

MODERN
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PACKING
LABELS
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STICKERS
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BOX TOPS
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MERCHANDISING MEANS INDELIBLY IMPRESSING THE MIND OF THE BUYER WITH THE MERITS AND VALUE OF THE PRODUCTS OFFERED.
NO BETTER MEANS OF ATTAINING THIS SUPREMELY IMPORTANT OBJECTIVE CAN BE FOUND THAN BY BRANDING THE PRODUCT AND MAKING THE BRAND A SYMBOL OF DEFINITE QUALITY AND VALUE.
IDEA SKETCHES FOR NEW DESIGNS AND QUOTATIONS ON THE REPRODUCTION OF ANY TYPES OF BRANDING MEDIA NOW IN USE WILL BE GLADLY PREPARED AND FURNISHED YOU WITHOUT OBLIGATION.
JACOBS
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In Philadelphia it's the

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Highly Recommended by Experienced Travelers the World Over for its Warm Hospitality; its Excellent Cuisine Served in Comfortably Air-Conditioned Restaurants; its Convenient Location to the Business Section; and its Unlimited Parking Facilities.

600 ROOMS with Bath From $2.50 Up

DANIEL CRAWFORD, JR., *Manager*

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. . give *good* service as a matter of course; they are popular because of their *friendly* service, which combine to make *better* service . . .

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OPERATING 3000 ROOMS IN SOUTHERN HOTELS

A Meeting Place
IN NEW YORK for COTTON MEN

Executives of your industry have favored The Vanderbilt for years... here you will always find men you know...or wish to know. It is convenient for your business requirements . . . ideal for entertaining.

Spacious rooms with bath from $4. single . . . . $6. double
Suites from $10

FIVE MINUTES FROM GRAND CENTRAL OR PENNSYLVANIA STATIONS

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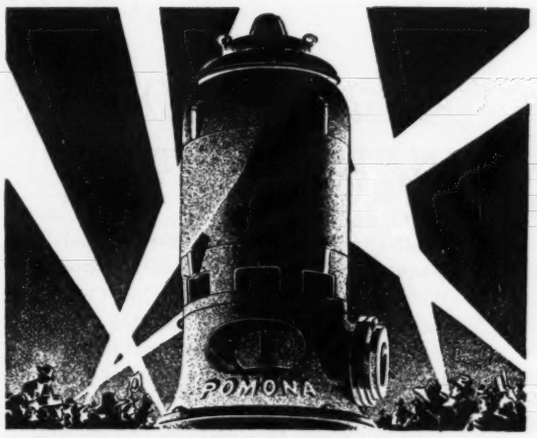
VANDERBILT HOTEL

Where Park Avenue Begins . . . at 34th Street
NEW YORK



America IS RETURNING TO QUALITY

Not only in America, but all over the world, the high quality of Pomona Pumps has produced economies in cash for the owners. In addition to saving money in the long run, Pomona quality insures dependable operation even under adverse conditions—always when water is needed—continuously or intermittently. Ultimately it is only by keeping quality up that you can cut costs down. This reasoning explains why more Pomona Pumps are bought than any others.

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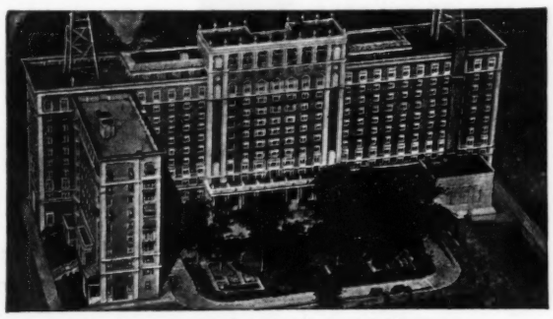
Where Your Hotel Requirements Are Met—



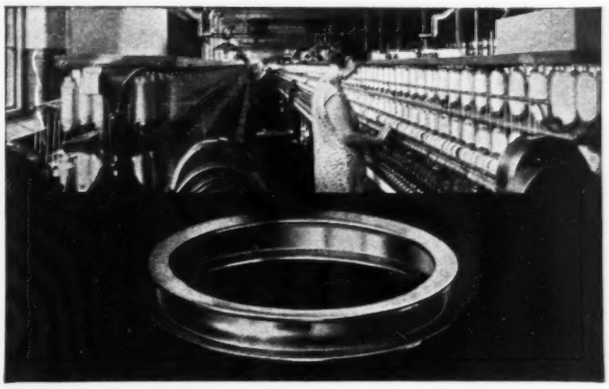
Atlanta's Most Looked-Up-To Address

. . . where you will receive friendly service in an atmosphere of comfort and dignity, away from the center of noise.

600 outside rooms — All with circulating ice water and bath. Dining room and Coffee Shop at popular prices.

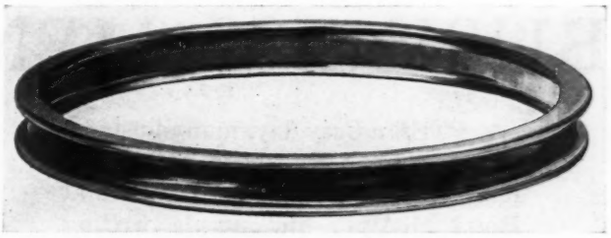
RATES FROM $3

ATLANTA BILTMORE



Rising pay necessitates rising machine efficiency

Labor costs are rising, but they need not rise per pound of yarn if you can increase machine efficiency to keep pace. 10% to 15% gains in production are frequent after replacing worn rings with new high-polish DIAMOND FINISH.



Look your rings over for production efficiency

Not all worn rings are as bad as the one shown above, but on this one a traveler would hardly run at all. If your rings have even a moderate amount of such defects as worn, narrow, or wavy flanges, speeds have to be kept below peak in order to prevent excessive ends down. In such cases, new rings will pay an immediate and substantial dividend.

STUDY YOUR RINGS—Important gains in production often result from modernization of ring practice. Let us help you study them.

WHITINSVILLE (MASS.) SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873

Southern Rep.: H. ROSS BROCK, LaFayette, Georgia
Mid-West Rep.: ALBERT R. BREEN, 80 East Jackson Blvd., Chicago

from NEW YORK . . .

a Suggestion to

BUSINESS MEN

AFTER a busy day, many business men have reports to make—letters to write, etc. Those who live at Hotel McAlpin find ample writing desks, pens that WRITE, plenty of stationery . . . plus the comfort and quiet to concentrate.

Add to this the luxury of the NEW rooms, beautifully decorated and furnished, and you will understand why the McAlpin is the preferred New York Hotel of thousands of busy business men.

JOHN J. WOELFLE, *Manager*

ROOMS WITH BATH FROM

$2.50 Single $4.00 Double $4.50 Twin-Bedded

HOTEL McALPIN

The Centre of Convenience

BROADWAY AT 34th STREET, NEW YORK

Back Fence TALK ON "THE CENTURY"

"Oh yes, Jim had a grand time, too. He's in the club car spreading the Stevens Gospel—he's so enthused about the truly finer things . . ."

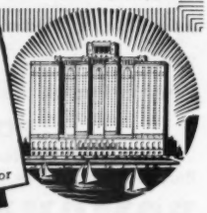
We're proud of our friends like Jim. On the extra fare trains you'll find them—the executive type who want more than average living yet know the real value of a dollar. They get it at The Stevens—and so they talk about it.

They tell about new services that smooth their busy days . . food for virile appetites . . restful nights that keep them fit . . added conveniences increasing ease and comfort . . a genuine interest that makes them feel at home.

The praise of busy men who know how to work and how to live has done much to make The Stevens Chicago's Outstanding Hotel.

Stevens HOTEL CHICAGO

OTTO K. EITEL, *Managing Director*



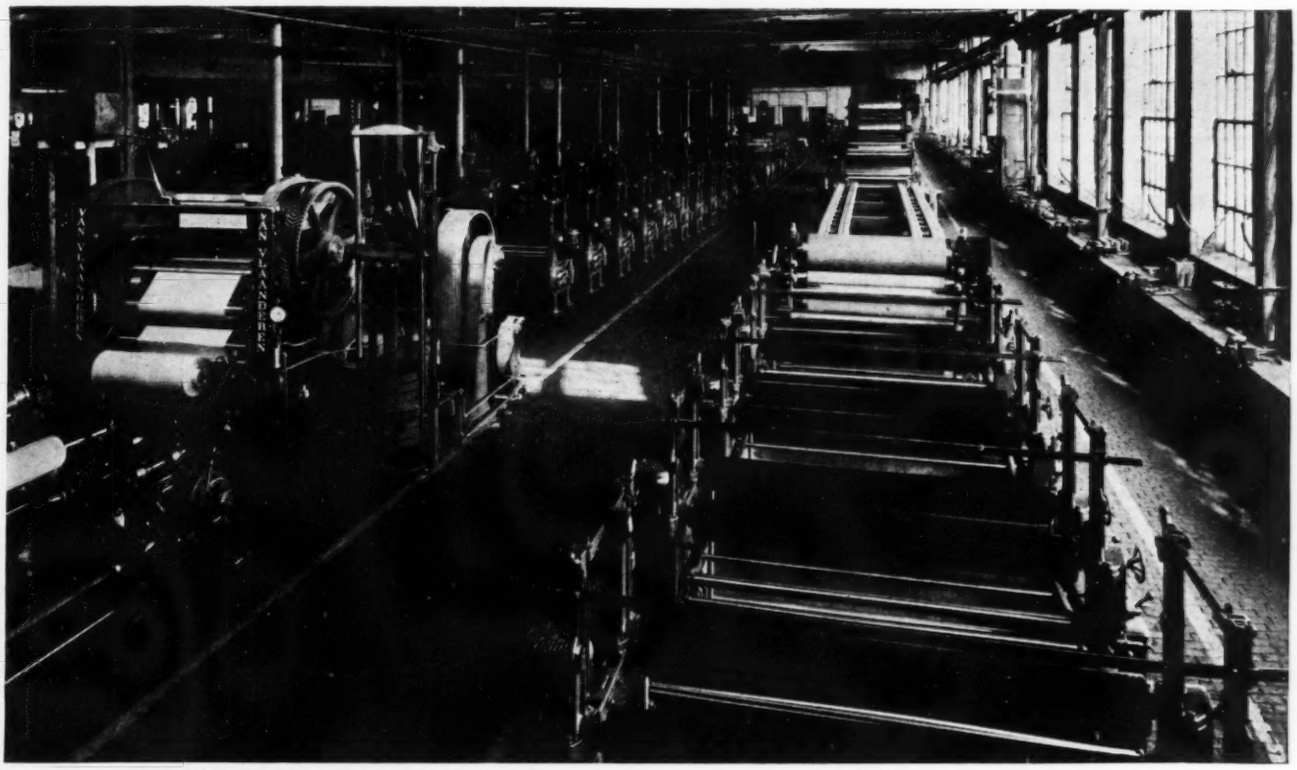
Bismarck HOTEL *chicago*

SAVE TIME!

The convenience of this newest Loop hostelry to everything in down-town Chicago saves you minutes and effort. An ultra-modern hotel equipped with services offering you the ultimate in excellent living.

Write for booklet.

Known for Good Food



NEW EQUIPMENT, recently photographed at our plant, ready for shipment. Others are modernizing. Are you? Consult with our engineers.

VAN VLAANDEREN MACHINE CO., 370 STRAIGHT ST., PATERSON, N. J.
World's Largest Manufacturer of Silk and Rayon Processing Machinery

UNIVERSAL
STANDARD RING TRAVELERS

BEST MEET THE SPECIFIC REQUIREMENTS FOR SPINNING AND TWISTING

THE BOWEN PATENTED BEVEL EDGE TRAVELER
VERTICAL OFFSET TRAVELER
FOR
EVEN SPINNING AND TWISTING
VERTICAL NE-BOW TRAVELER
FOR
SILK, RAYON AND FINE WORSTED YARNS. A TRAVELER THAT WILL NOT UNTHREAD. ESPECIALLY DESIGNED FOR LUBRICATING RINGS.

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"ATLAS BRAND"
EMERY FILLETING

"The New Flexible" **"Needs No Damping"**

Stocks in all the leading Mill Centres

TRADE MARK
ATLAS

The Standard Card-Grinding Medium

GUARANTEED "A" QUALITY
THE ONLY QUALITY WE MAKE

Used the wide world over, like The DRONSFIELD CARD-GRINDERS

Stocked by the
Principal
Mill Supply Houses
Sole Agents for Dronsfield's Machinery for U. S. A.:—
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Box number address care of COTTON, Grant Bldg., Atlanta, Ga., count as eight words.

FOR SALE QUICK

$20,000 Belton Yarn Mill Properties. Main mill building has 46,000 square ft. floor space, cotton warehouse has 6,500 square ft. Have automatic sprinkler system in these buildings, buildings are of standard mill construction, and good shape. 3 other iron clad warehouses, two story office building, commissary bldg., deep well, pump and tank. A complete water system, all under 8 ft. Pittsburgh Steel Fence. Have some good used machinery. Have 75 acres land, and 52 dwelling houses. This property located in good town, MK&T and Santa Fe Railroads, and on Federal Highway No. 81. Apply to W. M. Ferrell, Industrial Agent, Belton Chamber of Commerce, Belton, Texas.

WANTED

To contact mills needing superintendent. I am practical and technical on both plain and novelty yarns. Both plain and fancy fabrics. Now employed. Address Box No. 424, care COTTON, Grant Building, Atlanta, Georgia.

WE PAY CASH!

For Surplus or Odd Lots of Yarn
Rayon, Spun Silk, Raw Silk
Wool—Worsted—Cotton
(Any form dyed or Undyed)
QUANTITY NO OBJECT
J. C. YARN CO.,
109-111 Spring St., New York, N. Y.

Paul B. Eaton

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1408 Johnston Bldg., Charlotte, N. C.
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Former Member Examining Corps
U. S. Patent Office

WANTED:

EXPERIENCED TEXTILE MACHINERY SALESMAN for Southern territory. Prefer man around 35 years of age with practical knowledge of textile machinery and actual selling experience. Give full information and references in first letter. Everything will be held strictly confidential and interview accorded if justified. High class proposition. XYZ-69, c/o COTTON, 1020 Grant Bldg., Atlanta Georgia.

WANTED

Accounts on commission basis to sell to Southern textile industry by established salesman familiar with textile manufacturing. Address Box 412, care COTTON, Grant Bldg., Atlanta, Ga.

NOTICE OF SALE OF BRAID MILL, MACHINERY AND OTHER PROPERTY

Pursuant to a decree of the Equity Division of the Circuit Court of Etowah County, Alabama, all real and personal properties comprising what was formerly known as the Alabama Braid Corporation plant in the City of Gadsden, Alabama, will be sold at public outcry, to the highest bidder or bidders for cash, beginning at 12:00 o'clock Noon on the 26th day of July, 1937, at the said plant property in Gadsden, Alabama. The real property will be sold as a whole. Bidders desiring to make bids for separate items of the personal properties will be permitted to designate any items upon which bids are desired to be made and such designated items will then be offered for sale separately, and thereafter all of said personal properties not so designated by item will be offered for sale, and thereafter all of said personal properties will be offered for sale as a whole, and the same will then be sold in that manner which will bring the highest aggregate price therefor. All such sales will be subject to confirmation by said Court. A detailed description of said properties may be secured upon application to the undersigned.

WALTER M. THOMPSON, Register in Chancery
GADSDEN, ALABAMA

Henderson TEXTILE Repair Parts

THEY last longer because they are reinforced at the places where ordinary parts break.

They fit more accurately and operate more smoothly at higher speeds because they are made from precision patterns by expert workmen.

Write today for prices

HENDERSON FOUNDRY & MACHINE WORKS
HAMPTON, GEORGIA

When Troubles Speak— *It's Too Late!*

It's the unseen forces—tight bearings, improper adjustments, loose connections, etc—in your machinery that cause expensive breakdowns and loss of production.

These troubles usually do not show themselves until a breakdown occurs—then it's too late!

Use the Walker method of periodic power consumption tests and avoid expense by finding these unseen troubles before they can cause serious losses. Wasted power is a forerunner of the breakdown to come.

The necessary equipment is inexpensive and easy to use.

Write today for complete information.

WALKER ELECTRICAL CO.
Atlanta, Ga.

"Cut our consumption of belting fully 40%"

A well known textile mill equipped all loose pulleys in their spinning room with Moccasin Bushings. They found that these oil distributing bushings entirely eliminated hot pulleys, reduced consumption of oil and cut down consumption of belting fully 40%.

This is typical of the savings found in every installation of Moccasin Oil Distributing Bushings. They need attention only three or four times a year. They will not drip or throw oil. Friction wear, loss of power, wasted oil, oil spotted fabrics, dirty floors, etc., are reduced to the minimum. And Moccasin Bushings are notably long lived — users have reported no sign of wear after ten years service.

Let Moccasin Oil Distributing Bushings help you modernize the bearings on your looms, twisters, loose pulleys, etc. Write today for data.

MOCCASIN BUSHING CO.
CHATTANOOGA, TENNESSEE
Makers of Brass and Bronze Bars and Castings of Every Description

MOCCASIN BUSHINGS

Oil Distributing *Phosphor Bronze*

COOPER STAINLESS CASTINGS

THE IDEAL METAL
for
CORROSION RESISTANCE
in the
TEXTILE INDUSTRY

• • •

Special Castings
(Rough or machined)
Pipe Fittings • Valves
Shipments from Stock

THE COOPER ALLOY FOUNDRY CO.
Elizabeth, N. J.

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Forget Business Forecasts

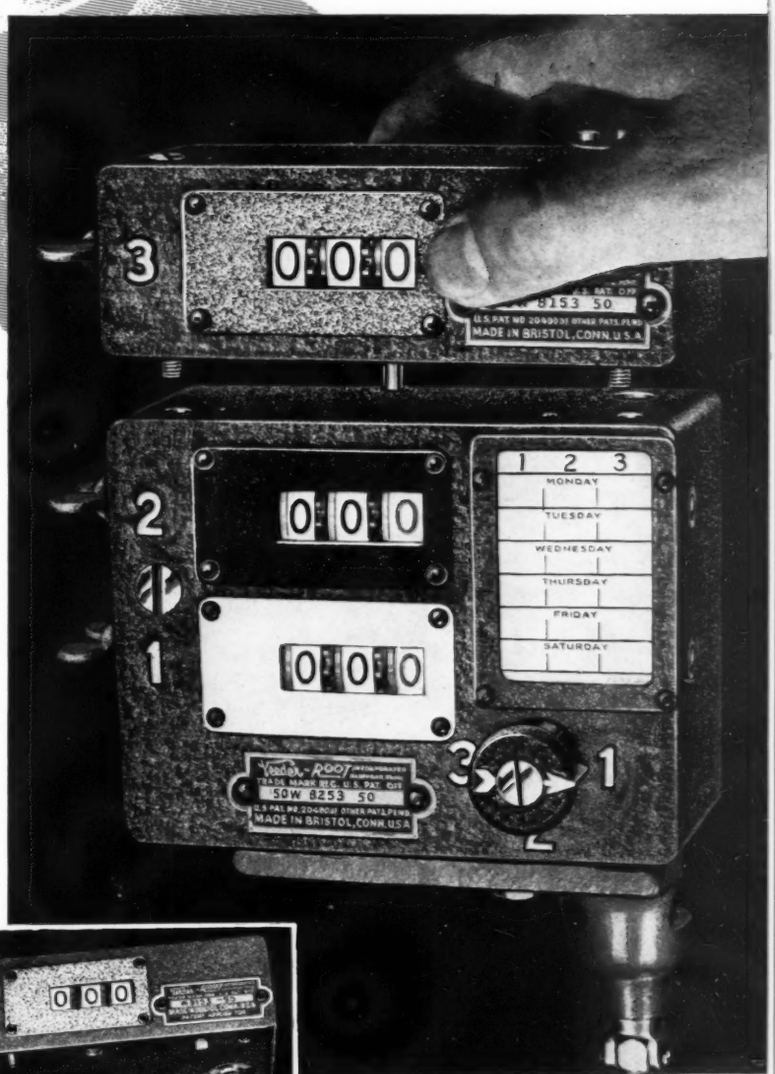
BE READY FOR WHATEVER HAPPENS

EQUIP YOUR LOOMS WITH Veeder-Root RESET 2-3 PICK COUNTERS

From the day you equip your looms with these quickly convertible counters, you can file the business forecasts in the waste-basket.

For no matter which way the wind blows, *you're all set.* Your 2-shift counters take care of today. And if tomorrow brings 3-shift operation, all you have to do is buy third counting units and have your men convert your 2-shift counters into complete 3-shift counters, exactly the same as counters originally built for 3-shift operation.

Get this future security now . . . you don't have to pay for it till you need it. Call in the nearest Veeder-Root representative — have him show you the amount of time, trouble, and money you will be enabled to save with Veeder-Root 2-3 Pick Counters.

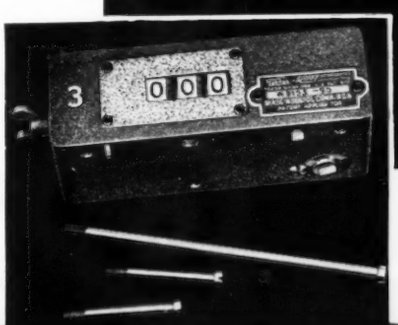


Veeder-Root

VEEDER-ROOT INC., HARTFORD, CONN.

GREENVILLE, S. C.

BOSTON - PHILADELPHIA - MONTREAL - LONDON

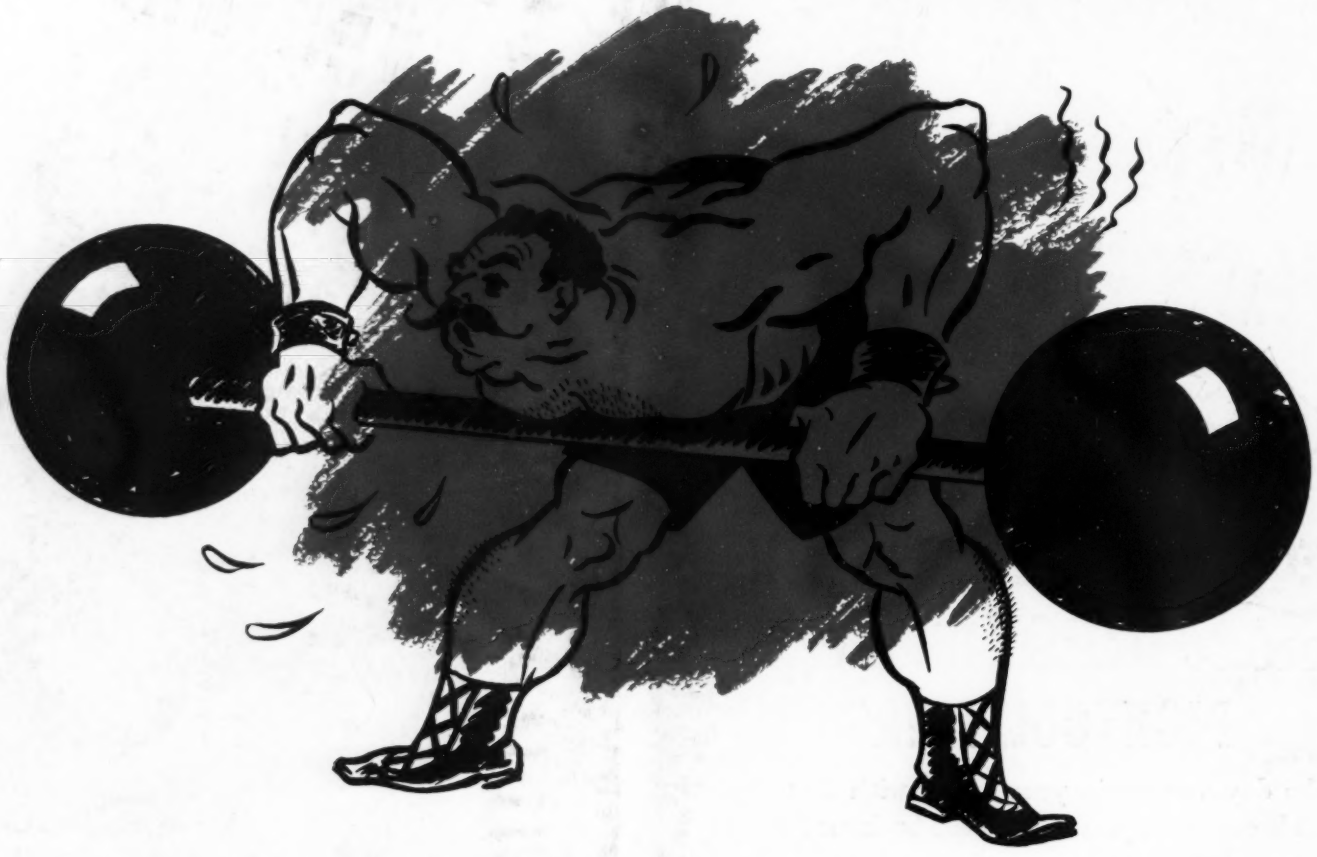


This third counting unit and these three screws are all you need to convert from two to three-shift operation — right in your own mill.

BUILDERS OF COUNTING DEVICES SINCE 1878

"Lift'a da Weight!"

...OF WORK...WORRY...EXPENSE



LIGHTEN UP! • with **"VATROLITE"** • the leading box office performer on Color reduction and Stripping • in the Vat!

"VATROLITE" runs BIG in the dyehouse • runs better fabric colors before the eyes of trade • and these FINER effects count in the front office pay-off.

PURITY and "VATROLITE" • say both in the same breath! No black specks to stain.

Uniformly granular and dusts less. Highly stable • stays with the job in full and uniform strength.

Specify **VATROLITE**

- ★ In any volume
- ★ Packed in moisture-proof containers of 50, 150 and 250 lbs. capacity.
- ★ SPOT STOCKS from warehouse at
- ★ CHARLOTTE, GREENVILLE, CHATTANOOGA, PHILADELPHIA, PROVIDENCE.

ROYCE CHEMICAL COMPANY CHEMICAL MANUFACTURERS CARLTON HILL • NEW JERSEY

LIFT A WEIGHT OF TROUBLE!.. *Specify*..

VATROLITE

REG. U.S PAT OFF